

Discussion

Readers can send in comments of up to 200 words on all papers and articles published in Civil Engineering. Subject to being approved by the editorial panel, full texts of readers' comments and authors' responses are published in the on-line version of the journal at www.ice.org.uk/jol (select *Civil Engineering* journal, then click on text link to *Discussion*). Edited highlights of the discussion on papers in recent issues are published here.

12844 Crowd-related failure of bridges by Bill Wolmuth and John Surtees (August 2003)

Contribution by John Hailey

Fig. 9 (also used on the front cover of the issue) is a glorious picture of bridge loaded by a crowd of people. If it was merely to show the people density possible and had been labelled as such – fine – but as an illustration of failure it is totalling misleading.

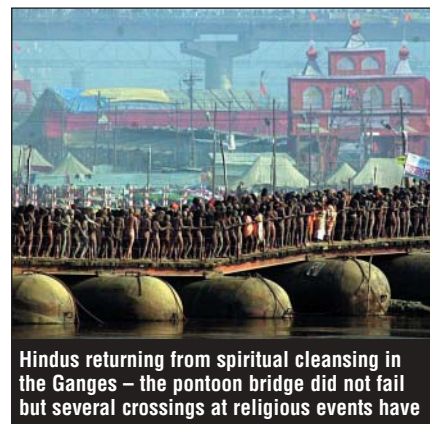
It appears to be a pontoon bridge suffering from a lack of maintenance, namely removal of water from the pontoons. The deck beams are not bent and are therefore correctly hinged.

Authors' reply

As Mr Hailey has pointed out, the bridge is reassuringly sound. Variation in deck level is probably caused by grounded pontoons adjusting to the river-bed profile, rather than Mr Hailey's suggested lack of maintenance.

Several bridge failures at religious events are reported in Table I of the paper but available photographs mainly consist of unpopulated post-collapse views with no hint of the large exuberant gathering that precipitated the collapse.

Crowd loading of bridges is the key theme of the paper and the high civil engineering content and vivid pictorial quality make this image our favourite.



Hindus returning from spiritual cleansing in the Ganges – the pontoon bridge did not fail but several crossings at religious events have

13082 British civil engineering skills: defusing the time bomb by Mike Byfield (November 2003)

Contribution by Deryk Simpson

This is probably the most important and yet depressing paper published in the *Proceedings* in recent years. The implications for the future of our profession and the UK economy are stark. Our profession faces a severe decline. The effect of a severe shortage of civil engineers on Railtrack is well known. Magnify this shortage to the whole construction industry and the effect on our economy could be disastrous.

The problem described in the paper is so serious that the ICE must address itself to it immediately and put considerable resources in trying to fight the decline. If it does not, the ICE has no long-term future – certainly not in the form that my generation knew!

Authors' response

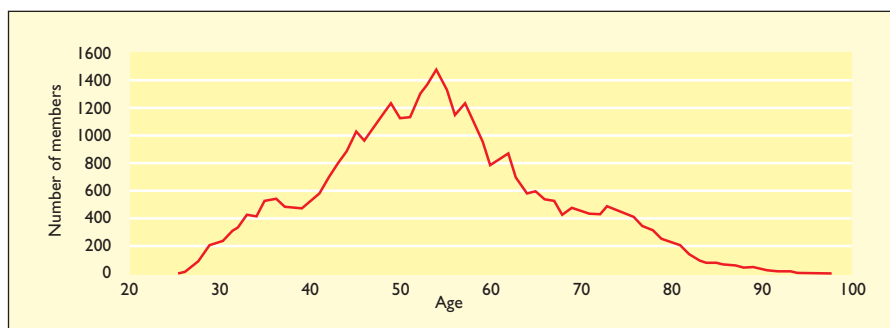
At the time of writing the paper I thought that my findings had a chance of provoking the ICE to help universities. These hopes were I am afraid naïve.

The current view within the Institution is that overseas engineers are migrating to the UK and that routine design work is gradually being transferred overseas. I am assured that these global trends will solve the skills shortage.

Contribution by J. Gray

It is to be expected that academics in engineering education will take Dr Byfield's line.

But it would behove the Institution, given



Age profile of chartered ICE members – over half will retire in the next 10 years leaving primarily overseas engineers to make up the shortfall

the lack of any effective trade union for engineers, to take a closer interest in engineers' pay, conditions and job satisfaction so as to alleviate the stated drop-out rate of UK engineers. It would also help to ensure that employers are not robbing developing countries of young engineers who are needed there.

Author's reply

Mr Gray seems to suggest that the ICE should pressurise employers to increase pay. I cannot think how this could be achieved by the Institution and Mr Gray fails to suggest a method either. It may be easier to leave it up to market forces.

Contribution by H. Catherall

Another article in the same issue could possibly help the way forward, that is upskilling civil engineering managers with the new chartered manager status. Offering civil engineering as a joint honours subject with management could also help.

Another area of concern to the UK civil engineering industry and for that matter other professional areas is the 'offshoring' of specialist design / detailing / IT / software development activities that will be carried out in low-cost countries, in particular India. So, in addition to the shortage of UK trained engineers, we will find that highly specialised desk-top activities can be easily and cheaply carried out around the world.

Authors' reply

Mr Catherall is absolutely correct, management degrees are extremely popular. My experience is that employers are falling over themselves to hire engineering graduates whereas management graduates are by contrast easy to come by.

In the short term, 'offshoring' will certainly ease the skills shortage. Longer term, these offshore companies will almost certainly move into the more lucrative activities, perhaps recruiting UK engineers to provide the client interface. Offshoring is inadvertently inviting low-cost, high-skill foreign competition into our relatively safe domestic market. UK consultancies may end up regretting this.

This is probably the most important and yet depressing paper published in the *Proceedings* in recent years.

13257 Halley—at the edge of ice-station design by David Blake (November 2003)

Contribution by Maureen Skilling

It seems the 1961 accommodation building at Halley I has been overlooked. It is my understanding that this had been planned as the ground floor of a building to become three storeys high as the snow around it accumulated.

Unfortunately only about 10 % of the bolts necessary for floor fishplates and roof beams were sent. As the existing 1956 accommodation was unsatisfactory, the building was erected with recognition that the original concept would be unachievable.

Another problem arose from the mastic sealant between panels being unworkable in the ambient temperatures.

*Response on behalf of author by Alan Smith**

Ms Skilling's facts are correct. Crown Agents were responsible for design, bills of quantity, procurement and supervision of packing but there was a shortfall of major structural fixings for the first phase. The builders did everything possible to erect the building in such a way that it was structurally stable by using nuts and bolts from base supplies and, in some cases, manufacturing them.

Regarding sealants, they have never been successful in the Antarctic and use has been avoided wherever possible.

As well as the 1961 living building, a pitched-roof timber pre-fabricated office building was added to Halley I in 1964 (see Fig.).

* Alan Smith (tel: +44 (0)1765 688455) was head of buildings at the British Antarctic Survey. Now retired, he is preparing a detailed history of structures on the Brunt Ice Shelf and would welcome assistance.



A contemporary drawing shows the central area of Halley 1 in 1964/65, with the 1964 office building to the right, the 1961 living building in the centre and the 1956 living building to the bottom left.

ICE review

A review of recent and forthcoming developments and events at the Institution of Civil Engineers by ICE communications director Anne Moir. For further information please contact the communications office on 020 7665 2196.

Email news service



The second issue of the ICE's electronic newsletter *ICEExtra News* was sent out to around 30 000 ICE members, associated society members and civil engineering academics in December 2003. It was given an 85% approval rating by readers, up from 75% for the first issue that was emailed in September.

Each issue contains around 20 news items on latest developments at the Institution, special promotional offers, new publications and listings of local and national events. There will be around six issues a year, which it is hoped will be enough to keep members up to date without clogging up their email systems. Back issues are archived on the ICEExtra section of the ICE website (www.ice.org.uk/iceextra).

From an economic perspective, an email newsletter was the only viable option. The costs of printing and distributing a newsletter to every member on a regular basis is simply beyond the means of the Institution at this time. The newsletter is currently going to around 30% of the membership base and it is hoped more members will register in due course.

To receive *ICEExtra news*, members need to provide the ICE with a current email address. The easiest way to do this is on-line at ICEExtra. If you have registered an email address but have not received the newsletter, please check that the address is still valid and, if necessary, re-register your details at ICEExtra.

New demolition protocol

The ICE launched a demolition protocol in November to show how the production of demolition material can be linked to its specification as a high-value material in new buildings.

If widely adopted, the protocol would stimulate the supply and demand for recycled and recovered construction materials. The protocol also shows how the market can be driven through the development of regional planning guidance, supplementary planning guidance, planning conditions and agreements.

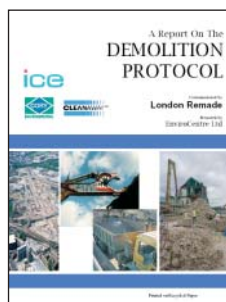
Recovery indexes are provided for demolition projects and new buildings—the latter aimed at increasing the amount of potentially recyclable material specified for new construction.

The report was prepared in conjunction with the Chartered Institution of Wastes Management, EnviroCentre, London Remade, Cory Environmental and Cleanaway.

Giving energy evidence

David Anderson, chairman of the ICE energy board, gave evidence to the House of Commons Trade and Industry Select Committee at the end of 2003. The evidence related to the committee's inquiry into the resilience of the National Grid following power blackouts in London and Birmingham in the summer.

It was the first time in nearly 3 years that ICE has given oral evidence to a parliamentary committee and follows the submission of writ-



ten evidence to 11 different select committee inquiries this year.

Anderson was questioned by MPs about the level of investment in the grid and network, about the chief engineering adviser and about reconfiguring the grid to deal with renewable sources.

Supporting toll motorways



The ICE publicly backed the opening of the UK's first toll motorway, a new section of the M6 north of Birmingham.

Senior vice president Colin Clinton told journalists: 'ICE has for many years supported the idea of road tolling as an effective way of reducing traffic gridlock across the UK. Currently congestion on the trunk road network is estimated to cost the nation £2.9 billion each year.'

He said toll roads may prove unpopular with drivers, but in the long-term ICE believes that the idea will prove essential in reducing congestion. Traffic jams are an issue road users must accept as a part of life unless they are willing to pay high enough fees to balance demand.

'Implementation of both the M6 toll motorway and the congestion charging scheme in Central London this year were both bold decisions. Both are examples of positive and initially unpopular action to suppress traffic rather than simply to accommodate it' said Clinton.

President's address

New ICE president Doug Oakervee gave his inaugural address in November. The text can be downloaded from the ICE website at www.ice.org.uk.



Books

>>> NEW BOOKS

The ICE's bookshop in London carries one of the most comprehensive ranges of civil engineering publications in the world. New books received in the past three months are as follows.

Advanced concrete technology – concrete properties J. Newman and B. S. Choo (eds)	£55	Health and safety Q&A P. Perry	£19.95
Advanced concrete technology – constituent materials J. Newman and B. S. Choo (eds)	£55	High-rise manual – typology and design, construction and technology J. Eisele and E. Kloft	£46.50
Advanced concrete technology – processes J. Newman and B. S. Choo (eds)	£55	Infrastructure cuttings J. Perry, M. Pedley and K. Brady	£90
Advanced concrete technology – testing and quality J. Newman and B. S. Choo (eds)	£55	International conference on coastal management 2002 Various	£65
Appraisal, risk and uncertainty N. Smith	£30	Recycling and re-use R. K. Dhir	£95
BGA international conference on foundations T. A. Newson (ed)	£115	Retention of masonry facades – best practice guide M. Bussell, D. Lazarus and P. Ross	£110
British railway track – vol. 4 – plain line maintenance D. L. Cope and J. B. Ellis	£45	Risk assessment Q&A P. Perry	£19.95
British railway track – vol. 5 – switch and crossing maintenance D. L. Cope and J. B. Ellis	£45	Rural and urban hydrology M. G. Mansell	£65
Buckling of thin metal shells J. G. Teng & J. M. Rotter (eds)	£99	Shell bitumen handbook J. Read and D. Whiteoak	£40
Conceptual structural design: bridging the gap between architects and engineers O. Popovic Larsen and A. Tyas	£20	Sustainable waste management R. K. Dhir	£75
Construction safety Q&A P. Perry	£19.95	Tension structures: form and behaviour W. J. Lewis	£30
Deep excavations – 2nd edition M. Puller	£90	The repair of historic timber structures D. Yeomans	£35
Fire safety Q&A P. Perry	£19.95	Traffic loading on highway bridges P. Dawe	£35
		Wastewater treatment and technology C. Forster	£65



The bookshop is in the ICE foyer, 1 Great George Street, London SW1P 3AA and is open from 9.30 am to 5.00 pm, Monday to Friday. Books can also be ordered by calling +44 (0)20 7665 2462, emailing orders@thomastelford.com or visiting www.thomastelford.com.

Internet

Editor Simon Fullalove's selection of websites likely to be of interest to civil engineers. If you know of a site you think should be included here, please contact him on +44 (0)20 7665 2448 or email simon.fullalove@ice.org.uk.

www.maps-direct.co.uk

Download digital Ordnance Survey maps for any 1 ha, 4 ha or 16 ha site in England, Scotland or Wales (£14.50 for 1 ha)

MAPSDIRECT

www.linesearch.org

Check if your proposed UK construction site has, or will have, an oil pipeline going through it (Free)

Linesearch.org

www.steel-stainless.org/software

Web-based software for sizing structural stainless-steel sections according to Eurocode 3 and SCI design guide (Free)

Stainless Steel in Construction

www.ukcivilengineering.com

Recruitment website for the UK civil engineering industry (Free to job seekers, from £15 per job for employers)

UK
CE
UK CIVIL ENGINEERING

www.ice.org.uk

New ICE website featuring new on-line bookshop, jobs database, download library and 'Engineers Reunited' (Free to members)

ice

Proceedings

> RECENTLY PUBLISHED PAPERS

In addition to *Civil Engineering*, the *ICE Proceedings* includes seven specialist journals. Papers published in the most recent issues are listed here. Summaries of all these and other papers published in the past 3 years can be read free on the ICE web site at www.ice.org.uk/jol.

Bridge Engineering

156, No. BE3, September 2003, 109–151

Experimentally-based assessment of masonry arch bridges

P. J. Fanning and T. E. Boothby

The construction of Taney Bridge, Ireland

D. Collings and P. C. Brown

The reconstructed Lions' Gate suspension bridge, Vancouver

P. G. Buckland and D. D. Matson

Dynamic measurements on bridges: design, rehabilitation and monitoring

Á. Cunha, E. Caetano, R. Calçada, G. De Roeck and B. Peeters



Engineering Sustainability

156, No. ES3, September 2003, 127–17

Editorial

BRIEFINGS

Corporate social responsibility—unworkable paradox or sustainable paradigm?

M. Barry

Sustainable coastal defence

H. R. Payne

Sustainability indicators for the water industry

J. Luckhurst

PAPERS

Ecological footprint analysis as a project assessment tool

I. R. Nicholson, N. Chambers and P. Green

Resource flow analysis: measuring sustainability in construction

P. I. J. Griffiths, R. A. Smith and J. Kersey

Designing sustainable estuarine intertidal habitats

N. I. Pontee

DISCUSSION

Sustainable development: understanding the concept and the practical challenge

S. Parkin, F. Sommer and S. Uren



Geotechnical Engineering

157, No. GE1, January 2004, 1–53

BRIEFINGS

Slope stability of earthfill dams: a case study of Kızılca dam

S. N. Keskin, U. S. Cavus and H. Yildirim

PAPERS

Settlement of a bridge embankment on soft soils

U. F. A. Karim, H. van Meekeren and R. Feenstra



Geotechnical analysis of a retaining wall in weak rock

D. J. Richards, C. R. I. Clayton, W. Powrie and T. Hayward

Approaches to the design of cantilever retaining walls

N. A. Trenter

Optimal design of highway cuttings in residual soils

A. Shein, M. S. Snaith and C. C. Holt

Municipal Engineer

156, ME3, September 2003, 155–215

Editorial

A. Fraser

BRIEFINGS

ICE Health and Safety Register

P. Fry

On the move: by foot

R. Huxford

PAPERS

Engineering a safe event: Edinburgh's International Festival fireworks

T. O'Brien

Construction safety legislation framework in China

D. P. Fang, J. Zhang and I. Vickeridge

Construction safety in 2003—time for radical action

J. Anderson

Making Irish roads safer

S. Proctor and F. Crowley

Driver distraction by advertising: genuine risk or urban myth?

B. Wallace

Safe streets—challenging the principles

P. Jones

Closed-circuit television in Daventry town centre, UK

S. P. Bowers

A flood failure flowchart for buildings

I. Kelman and R. Spence

Structures and Buildings

156, SB3, November 2003, 337–430

Editorial

PAPERS

Construction over nineteenth century brick railway tunnels

A. J. H. Brown

Strength of reinforced concrete pile caps

A. G. Bloodworth, P. A. Jackson and M. M. K. Lee

Facade failure effects on blast propagation along city streets

P. D. Smith, T. A. Rose, S. L. Krahe and M. A. Franks



Measurement of floor vibrations using a heel drop test

A. Blakeborough and M. S. Williams

Dynamic stiffness of reinforced concrete beams

K. S. Numayr, S. A. Al-Jallamdeh and N. M. Al-Akhras

Seismic design procedures for concentrically braced frames

A. Y. Elghazouli

CFRP strengthened continuous concrete beams

S. A. El-Rafaie, A. F. Ashour and S. V. Garrity

Development of self-compacting concrete

C. I. Goodier

TECHNICAL NOTE

Acceptance and monitoring of FRP-strengthened concrete structures

J. L. Clarke

DISCUSSION

Criteria for loading slabs during construction

A. W. Beeby

Holistic behaviour of concrete buildings in fire

C. Bailey

Transport

157, No. TR1, February 2004, 1–76

BRIEFING

Road congestion: how modal shift and planning policies could reduce it

ICE Transport Board

Can planning reduce traffic problems?

Goals, role and effectiveness of planning 1963–2020

P. Hall

Urban mobility worldwide: how does it look today?

D. Bayliss

More or less traffic in towns?

M. Buchanan

An investigation of lane utilisation on Turkish highways with reference to lateral discipline

B. Gunay

Benefits of adopting lower mass trains for high speed rail operations

B. Rochard and F. Schmid

PAPERS

Road marking assessment using digital image analysis

M. P. N. Burrows, H. T. Evdorides and M. S. Snaith

Segmentation algorithms for road marking digital image analysis

M. P. N. Burrows, H. T. Evdorides and M. S. Snaith

Evaluation of a mechanism for urban road maintenance by level of service

H. de Solminihac, E. Lobo, N. Jiménez and A. Altimira

Engineering the motorway system 1950–2000

R. Bridle and J. Porter



Water and Maritime Engineering

I56, No. WM4, December 2003, 297–365

Chichester emergency flood alleviation project, winter 2000/2001

R. S. Hoad, A. M. Gilham and D. S. Fawcett

Simulation of the great flood of December 1870 in Rome

G. Calenda, L. Calvani and C. P. Mancini

**Discharge assessment in mobile-bed compound meandering channels**

J. J. O' Sullivan, W. R. C. Myers, J. F. Lyness and M. F. Lambert

Computer modelling of two-stage meandering channel flows

P. Rameshwaran and K. Shiono

Performance of sandbags for domestic flood defence

D. Reeve and A. Badr

Water resources and food security: a Caribbean case study

G. S. Shrivastava

DISCUSSION**Sewage discharge estimation from a flow-stick monitoring device**

R. Burrows, K. H. M. Ali and G. Okleston

Design considerations for improved dock mitre gates

M. Cullen 358

Effect of tailwater depth and model scale on scour at culvert outlets

R. A. Day, S. L. Liriano and W. R. White

Personal subscriptions to specialist *Proceedings* journals start from £11 a year for members. Print subscriptions include full on-line access to the past 3 years' issues. Please call +44 (0)20 7665 2227, email subs@ice.org.uk or visit the ICE virtual library at www.iceknowledge.com. At the virtual library members can also download any 15 *Proceedings* papers published this year for £25 or any paper published over 3 years ago at £5 each.

ICE meetings

The following meetings, seminars and social events have been organised by ICE staff and regions. All are free to attend unless indicated by (£). Before travelling, please contact the organiser or visit the ICE web site at www.ice.org.uk to confirm details. Events have been classified under broad but not necessarily exclusive headings.

Title	Date (dd/mm) and time	Organiser	Contact	Telephone (+44 outside UK)	Email	Venue
MANAGEMENT AND GENERAL						
Engineering and Construction Contract, by Richard Patterson	04/02 18:00	ICE East Anglia	Jacqui Braby	01603 224 284	ian.bentley@metronetbcv.com	Norwich
Infrastructure management during operations	10/02 18:00	ICE South / Royal Engineers	Jacqui Brown	02962 869263	jacqui.brown@ice.org.uk	Blackwater
NEC ECC: an introduction ¹	11/02 09:30	Thomas Telford Training	Diane Lewis	0800 1830133	training@thomastelford.com	Falkirk
How the changes at ICE affect you, by Tom Foulkes	11/02 18:30	ICE South West	Lars Jorgensen	01452 429260	lars.jorgensen@wspgroup.com	Gloucester
Extension of time and delay / prolongation costs with reference to the Society of Construction Law protocol, by Terry Clarke	16/02 18:30	ICE North West / RICS / Chartered Inst of Arbitrators	Steve Jones	0161 911 4337	env.highways.structures@oldham.gov.uk	Liverpool
CDM Regulations – an overview (£)	19/02 09:30	Thomas Telford Training	Diane Lewis	0800 1830133	training@thomastelford.com	Falkirk
Specialist engineer support to operations in Iraq	25/02 18:30	ICE South East	Anne Qualters	020 8289 6444	aqualters@btopenworld.com	Chatham
Development infrastructure – can we afford it?	03/03 19:00	ICE South East	Anne Qualters	020 8289 6444	aqualters@btopenworld.com	Ashford
Safety	10/03 00:00	ICE Midlands	Peter Dennis	01743 542 600	peter.dennis@balvac.co.uk	Worcester
Learning from disaster, by David Rowbotham	11/03 18:30	ICE South East	Anne Qualters	020 8289 6444	aqualters@btopenworld.com	Croydon
Communication skills (£)	12/03 09:00	ICE Chilterns / ICE East Anglia	Cathy Shelbourne	01473 788970	cshel@btinternet.com	Cambridge
RedR - engineering in the humanitarian field	21/03 18:15	ICE East of Scotland	Jon Hassel	0131 226 4693	jon.hassel@cbuchanan.co.uk	Edinburgh
Wider engineering problems of the Thames Gateway expansion	24/03 18:30	ICE South East	Anne Qualters	020 8289 6444	aqualters@btopenworld.com	Dartford
History of the ICE, by Mike Chrimes	25/03 18:00	ICE Midlands	John Lau	0121 414 5152		Birmingham
Insurance, by Barry Franks	05/04 18:30	ICE Midlands	Garry Dyer	01905 832 900	garry.dyer@laser-group.co.uk	Worcester
Unwin lecture	06/04 18:00	ICE research and innovation committee	Kathleen Hollow	0207 665 2242	kathleen.hollow@ice.org.uk	London
Revitalising health and Safety, by Hywel Williams	08/04 18:30	ICE North West	John Edwards	0151 482 3500	john.edwards2@mowlem.com	Ellesmere Port
Recent legal developments in construction and engineering law, by Steven Carey (£)	21/04 19:00	ICE Thames Valley	John Done	0118 988 4816	donejrdlers@waitrose.com	TBA
Project management my way, by Keith Hughes	22/04 18:00	ICE Midlands	Bogdan Tutoveanu	01543 440 600	bogdan.tutoveanu@cambba.com	Birmingham
Benchmarking and customer satisfaction measurement for construction	27/04 18:30	ICE Chilterns / BRE / Business Link (Hertfordshire)	Louisa Rix	01767 627046	ptee@rix1.demon.co.uk	Watford
Construction management	27/04 18:30	ICE East Midlands	David Millard	1522	trentvalley@tiscali.co.uk	Lincoln
Design – the engineer as an artist (£)	28/04 09:30	ICE South East	Anne Qualters	020 8289 6444	aqualters@btopenworld.com	Swanley
ENVIRONMENT AND ENERGY						
Sakhalin development, by David Meehan	04/02 17:30	Offshore Engineering Society	Anne-Marie Ferguson	020 7665 2232	anne-marie.ferguson@ice.org.uk	London
Renewable energy	09/02 18:15	ICE Northern Counties	John Johnson		john.johnson@capita.co.uk	Newcastle Upon Tyne
Environmental impact assessments and specific species	17/02 18:30	ICE East Midlands / CIWEM	Mark Anderson	01733 366900	mark.p.anderson@atkingglobal.com / njp@bullen.co.uk	Peterborough
Waste Management Wales	19/02 09:00	ICE Wales / CIWEM	Eileen Taylor	029 2063 0561	denys.morgan@ice.org.uk	Cardiff
Energy efficiency in buildings (£)	26/02 09:30	ICE energy board / IMechE	Peter Madigan	020 7665 2235	peter.madigan@ice.org.uk	London
Recycling to meet statutory targets	26/02 18:30	ICE Wales	Peter Simpson	01286 679066	denys.morgan@ice.org.uk	Abergele
Fuel cells engineering and infrastructure for passenger cars, by Mike Monaghan	09/03 19:30	ICE Chilterns / IMechE / IEE	Brian Powell	01296 481 680		High Wycombe
Construction waste management.	17/03 00:00	ICE East of Scotland	Chic Haggart	01738 476540	chhaggart@pkc.gov.uk	Dundee
Environment and construction – what you need to know, by P. Rainbow	18/03 18:30	ICE North West	John Edwards	0151 482 3500	john.edwards2@mowlem.com	Chester
Contaminated land classification update – ICRCL RIP, by Paul Nathaniel and Caroline McCaffery	22/03 18:30	ICE North West / Geotechnical Group	Steve Jones	0161 911 4337	env.highways.structures@oldham.gov.uk	Liverpool
Better streets, better places – delivering sustainable residential developments	30/03 18:00	ICE South	Duncan McVey	023 8068 8234	duncan.mcvey@eastleigh.gov.uk	Southampton
Climate change – the challenge for civil engineers	31/03 14:30	ICE South	Andy Finch	023 9283 4620	afinch@portsmouthcc.gov.uk	Southampton
Renewable energy from microgeneration to large-scale power production	31/03 18:00	ICE South	Jacqui Brown	02962 869263	jacqui.brown@ice.org.uk	Southampton
Landfill v. recycling v. destruction	06/04 18:30	ICE East Midlands / IStructE	Andrew Kersley	01733 414170	akersley@anglianwater.co.uk / njp@bullen.co.uk	Peterborough
Site visit to wind turbines	14/04	ICE East Anglia	John Pardoe	01245 247 098	ian.bentley@metronetbcv.com	Norwich
Winds of change - offshore wind energy in the UK, by Roger Maddrell	14/04 18:30	ICE South West	Laurence Banyard	01793 816324	banyardls@halcrow.com	Swindon
Waste management infrastructure: the multi-billion pound industry (£)	23/04	ICE waste management board	Marianne Jones	020 7665 2314	marianne.jones@ice.org.uk	London
Alternative energy	23/04 09:00	ICE East Midlands	Janet McAteer / Andrew Rouse	01733 560033 / 01733 371811	mcateerjc@halcrow.com / andrew.rouse@environment-agency.gov.uk	Peterborough
GEOTECHNICAL						
Stabilisation of Irish soils, by Samir Hebib and Eric Farrell	02/02 18:15	ICE Northern Ireland	Wendy Blundell	(028) 9087 7157	wendy.blundell@ice.org.uk	Belfast
Ground decontamination, by Graham Paton, Remedios	02/02 18:30	ICE East of Scotland	Andrew Martin	01224 631122	amartin@arch-henderson.co.uk	Aberdeen
What is the matter with geotechnical engineering?, by J H Atkinson	09/02 18:30	ICE East Midlands	Ed Faragher	01509 282304	ed.faragher@advantica.biz	Nottingham
No dig roadshow (£)	10/02	UK Society for Trenchless Technology	Peter Madigan	020 7665 2235	peter.madigan@ice.org.uk	Livingston
Box jacking	10/02 18:15	ICE Northern Counties / IHT	Robert Thorniley-Walker	01609 779904		Holiday Inn, Stainton, Middlesbrough
Monitored performance of a bored-pile retaining wall	17/02 18:00	ICE South	Jo Clark	023 8059 5439	jo.clark@soton.ac.uk	Basingstoke
Geophysics in fluvial and marine environments	18/02 18:15	ICE Wales / CIWEM	Charlie Martin	029 2026 6598	denys.morgan@ice.org.uk	Pontypridd
Legal aspects of slope stability, by Mark Fallows	18/02 18:30	ICE North West / IGS	Jane Collins	0161 228 2331	jane.collins@arup.com	Manchester
Piled raft foundation in down town Luanda, by Dr Rob May (£)	18/03 19:00	ICE Thames Valley	Lydia Sparshott	0118 963 5000	lydia.sparshott@jacobs.com	Reading
Skempton conference (£)	29/03 to 31/03	British Geotechnical Association / ICE conferences / Geotechnical Engineering advisory panel	Sue Frye	020 7665 2315	sue.frye@ice.org.uk	London

Seismic hazards	31/03 17:30	Society for Earthquake and Civil Eunice Waddell Engineering Dynamics	020 7665 2238	eunice.waddell@ice.org.uk	London	
GIS in geotechnical engineering	05/04 18:30	ICE East Midlands	Ed Faragher	01509 282304	ed.faragher@advantica.biz	Nottingham
Application of centrifuge modelling to foundation design in France, by Jacques Garnier	14/04 18:30	ICE NW Geotechnical Group / UK Chapter IGS	Jane Collins	0161 228 2331	jane.collins@arup.com	Manchester
Earth will not move for you, by Stan Mimms	15/04 18:30	ICE North West	Paul Williams	01925 828 987	paul.williams@atkinsglobal.com	Manchester
Trenchless technology	20/04 18:00	ICE South	Chris Ford	01256 461 161	chris.ford@swkeurope.com	Winchester
History of salt mining, by Andrew Fielding	22/04 18:30	ICE North West / HEG	John Edwards	0151 482 3500	john.edwards2@mowlem.com	Ellesmere Port
Site investigation, by Nicholas Watson	22/04 18:30	ICE Midlands	Mary Anne Raftery	01785 276 697	maryanne.raftery@staffordshire.gov.uk	Stoke-on-Trent
The ground under Norwich, by Steve Hague	28/04 19:00	ICE East Anglia	Jacqui Braby	01603 224 284	ian.bentley@metronetbcv.com	Norwich
STRUCTURES AND MATERIALS						
High intensity winds (downraughts), by Norman Toy	03/02 17:30	Wind Engineering Society	Eunice Waddell	020 7665 2238	eunice.waddell@ice.org.uk	London
Design of the Spinnaker Tower	04/02 18:00	ICE South / IStructE	Jacqui Brown	02962 869263	jacqui.brown@ice.org.uk	Winchester
Royal Bank of Scotland Gogarburn world headquarters – design overview	04/02 18:15	ICE East of Scotland / IStructE	Jon Hassel	0131 226 4693	jon.hassel@cbuchanan.co.uk	Edinburgh
Waterproofing of basements, by Graham Wilkins	04/02 18:30	ICE East Midlands / Concrete Society	Neil Besley	01332 256026	neil.besley@derby.gov.uk	Scunthorpe
Buildings at risk from bomb blast, by Geoff Mays and Peter Smith	17/02 16:30	ICE Chilterns / AME	Chris Goodacre	01234 763400	chris.goodacre@babtie.com	St Albans
Building security against the threat of terrorism (£)	18/02 00:00	ICE conferences / CIBSE	Juliet Hutchings	020 7665 2318	juliet.hutchings@ice.org.uk	London
Morgan Academy: phoenix by design, by Ken Laing	18/02 18:15	ICE East of Scotland	Chic Haggart	01738 476540	chhaggart@pkc.gov.uk	Dundee
Cover to reinforcement - getting it right, by Chris Shaw (£)	18/02 19:00	ICE Thames Valley	Alan Bromage	01344 762 676	abromage@concretecentre.com	Guildford
Spire of Dublin, by Andy Futrell	19/02 18:30	ICE North West	John Edwards	0151 482 3500	john.edwards2@mowlem.com	Ellesmere Port
Lessons from failure: obtaining benefit from setback, by John Carpenter	24/02 18:30	ICE North West / IStructE	Paul Williams	01925 828 987	paul.williams@atkinsglobal.com	Manchester
Galvanising techniques, by Graeme Morrison	01/03 18:30	ICE East of Scotland / IStructE	Andrew Martin	01224 631 122	amartin@arch-henderson.co.uk	Aberdeen
Silver Jubilee Bridge parapet replacement, by Ray Langley	04/03 00:00	ICE North West / IStructE	John Edwards	0151 482 3500	john.edwards2@mowlem.com	Chester
Avenue Coking works remediation, by Phil Reeves	15/03 18:30	ICE East Midlands	Ed Faragher	01509 282304	ed.faragher@advantica.biz	Loughborough
Bridges in the Salford Quays area, by Tom Swales	24/03 18:30	ICE North West / HEG	Paul Williams	01925 828 987	paul.williams@atkinsglobal.com	Manchester
Rebuilding CentreParcs	07/04 18:00	ICE East Anglia	John Pardoe	01245 247 098	ian.bentley@metronetbcv.com	Cambridge
Building of a Scottish Parliament	21/04 18:15	ICE East of Scotland	David Fraser	01738 476548	dfraser@pkc.gov.uk	Dundee
Concrete industrial flooring	21/04 18:30	ICE East Midlands / CIOB	Richard Smith	01933 357511	rlindsay@aol.com / njp@bullen.co.uk	Peterborough
TRANSPORT						
CTRL St Pancras, by Alan Dyke	05/02 18:00	Railway Civil Engineers' Association	Gavin Bowyer	020 7665 2233	gavin.bowyer@ice.org.uk	London
Variable message signs	05/02 18:00	ICE South West	James McKechnie / Nick Woollett	01392 229717	mckechnie@pbworld.com / woollett@pbworld.com	Exeter
Doubling the main line: Burngallow to Probus, by Graham Denny	08/02 18:00	Railway Civil Engineers' Association	Gavin Bowyer	020 7665 2233	gavin.bowyer@ice.org.uk	Bristol
Congestion charging – what next?, by David Begg	09/02 18:15	ICE Northern Ireland	Wendy Blundell	(028) 9087 7157	wendy.blundell@ice.org.uk	Belfast
A41 Aston Clinton Bypass, by Pradip Kotecha	10/02 19:30	ICE Chilterns / IMechE / IEE	Alistair Thompson	01494 636200	alistair.thompson@fitzpatrick.co.uk	Tring
A120 Stansted to Braintree, by John Hodgkins	11/02 18:00	ICE East Anglia	John Lemay	01245 247 038	ian.bentley@metronetbcv.com	Chelmsford
Urban traffic management and control, by Rick Hayton,	11/02 18:30	ICE North West / LCES / IHT	Frank Holden	01772 264 556	hcmalibox@env.lancscc.gov.uk	Preston
Crossrail links for London, by Bernard Gambrell (£)	11/02 19:00	ICE Thames Valley	Jon Hancock		j.hancock01@imperial.ac.uk	Reading
Kings Cross LUL station redevelopment	12/02 18:00	Railway Civil Engineers' Association	Pauline Arundel	020 7665 2236	pauline.arundel@ice.org.uk	London
Boyne Bridge	12/02 18:30	ICE Northern Counties	Steve Pollington	01900 826193		Ambleside
Urban traffic restraint – the issues, by Grant Butterworth	12/02 18:30	Transport Planning Society	Ian Gilliver	0161 839 3113		Warrington
Hard shoulder running on the M42	17/02 18:30	ICE Midlands	Gordon Lewis	01684 851 751	gordon.lewis@wspgroup.com	Bromsgrove
Wilcott Bridge, A5 Nesccliffe bypass	17/02 18:30	ICE Midlands / Concrete Society / IStructE	Paul Thompson	01933 231 730	pthompson@wellingborough.gov.uk	Northampton
Restoration of the Shrewsbury to Newport Canal, by David Adams and Dennis Rogers	18/02 18:30	ICE Midlands	Nick Newton	01743 282917	nick.newton@mouchellparkman.com	Shrewsbury
West Coast Mainline	23/02 00:00	ICE Midlands / ILT	Chris Jackson	01782 236 706		Stoke-on-Trent
Rail-induced vibration	25/02 17:30	Society for Earthquake and Civil Engineering Dynamics	Eunice Waddell	020 7665 2238	eunice.waddell@ice.org.uk	London
Surrey Strategic Partnership one year on, by Keith Fountain	25/02 18:30	ICE Midlands / IHT	Damian McGettrick	07740 025 402	dmcgettrick@carillion-urs.com	Birmingham
Vision for transport, by Alan Lovell (£)	25/02 19:00	ICE Thames Valley	Sally Ellis	01344 770 023	sjellis@trl.co.uk	Leatherhead
Track maintenance contracting strategy, by Norman Roberts	26/02 18:00	Railway Civil Engineers' Association	Gavin Bowyer	020 7665 2233	gavin.bowyer@ice.org.uk	London
Heathrow Terminal 5	03/03 18:00	ICE South	Jacqui Brown	02962 869263	jacqui.brown@ice.org.uk	Basingstoke
Kings Cross station development, by Joint Team	03/03 18:00	ICE East Anglia	John Lemay	01245 247 038	ian.bentley@metronetbcv.com	Chelmsford
Dublin Port Tunnel, by Martin Banham	08/03 18:15	ICE Northern Ireland / Concrete Society	Wendy Blundell	(028) 9087 7157	wendy.blundell@ice.org.uk	Belfast
Port of Liverpool strategic transport access study, by Stuart Waldron	08/03 18:30	ICE North West / TEG / IHT / ILT	Steve Jones	0161 911 4337	env.highways.structures@ assle.gov.uk	Liverpool
Portsmouth's real-time integrated information system	10/03 18:00	ICE South	Kerry McDermott	023 9283 4612	kmcdermott@portsmouthcc.gov.uk	Portsmouth
Railway accident investigation	11/03 18:00	Railway Civil Engineers' Association	Pauline Arundel	020 7665 2236	pauline.arudel@ice.org.uk	London
Milton Keynes to Bedford Canal proposals, by James Clinton	16/03 18:30	ICE Midlands / ICE Chilterns	Paul Thompson / Louisa Rix	01933 231 730 / 01767 627046	pthompson@wellingborough.gov.uk / ptee@rix1.demon.co.uk	Northampton
Fens waterways link	17/03 18:30	ICE East Midlands	John Oldfield	01733 464478	john.oldfield@environment-agency.gov.uk / njp@bullen.co.uk	Peterborough
Railway speed and service improvements at Filton, by John Hayes	17/03 18:30	ICE South West / Railway Civil Engineers' Association	Mike Sheridan / Gavin Bowyer	01793 751 104 / 020 7665 2233	michael.sheridan3@btopenworld.com / gavin.bowyer@ice.org.uk	Swindon
Higham and Strood Tunnels, by Colin Sims	25/03 18:00	Railway Civil Engineers' Association	Gavin Bowyer	020 7665 2233	gavin.bowyer@ice.org.uk	London
Canal restoration, by Keith Paylor	06/04 18:30	ICE East Midlands	Mark Adams	01522 785995	mark.adams@environment-agency.gov.uk	Grimsbby
Sustainability in Terminal 5 construction (£)	07/04 19:00	ICE Thames Valley	James Gordon	0118 9635 145	james.gordon@jacobs.com	TBA
West Coast Main Line upgrade: Manchester South capacity improvements	21/04 18:30	ICE North West / TEG / LCES / IHT / Railway Civil Engineers Association	Dave Colbert	01772 534 602	dcolbert@env.lancscc.gov.uk	Preston
Transportation – the DDA and social issues	22/04 10:00	ICE South West	James McKechnie / Nick Woollett	01392 229717	mckechnie@pbworld.com / woollett@pbworld.com	Exeter
Safety cameras – revenue and public perception	27/04 18:30	ICE South East	Anne Qualters	020 8289 6444	aqualters@btopenworld.com	Maidstone
Major road building – debate	27/04 19:30	ICE South	Mark Sperry	01243 777638	mark.sperry@westsussex.gov.uk	Portsmouth
Edinburgh trams, by Alex Macaulay	29/04 18:15	ICE East of Scotland / Scottish Traffic and Transportation Group	Jon Hassel	0131 226 4693	jon.hassel@cbuchanan.co.uk	Edinburgh

WATER AND MARITIME

Flooding and the law	03/02 18:00	ICE South	Joanne Coupland	01256 461161	joanne.coupland@scottwilson.com	Southampton
Flood defence to food risk - a flood of change	03/02 19:30	ICE Northern Counties	D Stocks	01925 236691		Kendal
Marine and spatial planning	11/02 14:00	International Navigation Association	Anne-Marie Ferguson	020 7665 2232	anne-marie.ferguson@ice.org.uk	London
Water resource strategies in Scotland (£)	11/02 18:30	ICE water board / Scottish Hydraulics Study Group	Michael Cranston	01738 627989	michael.cranston@sepa.org.uk	Glasgow
Cardiff Docks and Barrage (tour)	25/02 11:00	ICE Wales	Adrian Wilson	029 2082 5553	denys.morgan@ice.org.uk	Cardiff
Suffolk estuaries in the 22nd century – sustainable engineering solutions, by Nigel Pask	25/02 18:00	ICE East Anglia	Leigh Parratt	01603 619 916	ian.bentley@metronetbcv.com	Ipswich
John Sargent Lecture	26/02 17:30	Central Dredging Association	Anne-Marie Ferguson	020 7665 2232	anne-marie.ferguson@ice.org.uk	London
Barracuda/Caratinga, by Ricardo Argiolas and Majid Hesari	03/03 17:30	Offshore Engineering Society	Anne-Marie Ferguson	020 7665 2232	anne-marie.ferguson@ice.org.uk	London
Current water resource issues, by Hilary Smithers	10/03 18:30	ICE North West / CIWEM	Trevor Simm	01772 746 514	trevor.simm@virgin.net	Preston
On the crest of a wave – professionals' contribution to the port and navigation sector	11/03 14:00	International Navigation Association	Anne-Marie Ferguson	020 7665 2232	anne-marie.ferguson@ice.org.uk	London
Indices of flooding in afforested catchments, by David Archer	11/03 18:30	ICE water board / British Hydrological Society / ICE Scotland	Michael Cranston	01738 627989	michael.cranston@sepa.org.uk	Glasgow
Southern Water approach to innovative ideas	17/03 18:00	ICE South / IMechE	Jacqui Brown	02962 869263	jacqui.brown@ice.org.uk	Brighton
Edinburgh Airport - surface water environmental impact, by Rachel Philip	17/03 18:15	ICE East of Scotland	Jon Hassel	0131 226 4693	jon.hassel@cbuchanan.co.uk	Edinburgh
Land-sea margin: wave overtopping and protection along the coastline (£)	18/03	ICE maritime board / ICE conferences	Alice Staite	020 7665 2313	alice.staite@ice.org.uk	London
Advances in spatial rainfall representation, by Howard Wheeler, Scott Ferguson and Murray Dale	18/03 18:00	British Hydrological Society	Helen Procter	01903 703822	helen.procter@environment-agency.gov.uk	London
Port of Dover	18/03 18:30	ICE South	David Dales	01256 892728	david.dales@scottwilson.com	Brighton
Pakistan dams, by Peter Mason	22/03 18:00	ICE water board / Dam Society	Tim Fuller	020 7665 2234	tim.fuller@ice.org.uk	London
Buxton sewage treatment works	25/03 18:30	ICE Midlands	Andrew Shufflebotham	01332 683 216	andrew.shufflebotham@severntrent.co.uk	Derby
Recent Moray flooding, by Peter Haslam	29/03 18:30	ICE East of Scotland / IHT / SHSG / CIWEM	Andrew Martin	01224 631122	amartin@arch-henderson.co.uk	Aberdeen
Integrating wetlands hydrology and ecology	31/03 09:30	British Hydrological Society / British Ecological Society / Environment Agency / Centre for Ecology and Hydrology	Mike Acreman	01491 838800	man@ceh.ac.uk	London
Single point mooring, Andrew Newport	07/04 18:00	Offshore Engineering Society	Anne-Marie Ferguson	020 7665 2232	anne-marie.ferguson@ice.org.uk	London
Problems and solutions to water and sanitation in the developing world, by Rosemary Redmond and James Newton	07/04 18:30	ICE Chilterns / CIWEM	Brian Flynn	01799 522233	b.flynn@flynnandrothwell.com	St Albans
Historic failure of dams, by Andy Hughes	14/04 18:00	ICE East Anglia	John Lemay	01245 247 038	ian.bentley@metronetbcv.com	Chelmsford
Wateraid	20/04 18:30	ICE Midlands	Paul Thompson	01933 231 730	p.thompson@wellingborough.gov.uk	Northampton
Moray Flood alleviation scheme	21/04 13:00	ICE water board / British Hydrological Society / ICE Scotland	Michael Cranston	01738 627989	michael.cranston@sepa.org.uk	Elgin

The following is a list of referees who have reviewed papers for Civil Engineering between 1 November 2002 and 1 November 2003. The Institution is very grateful for their assistance. If you would like to be considered as a referee, please contact the journal secretary Agnes Alvite on 020 7665 2204 or email agnes.alvite@ice.org.uk

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