

Set sustainability targets for construction industry, engineers tell PM

The UK Prime Minister, Tony Blair, has been advised to get tougher on sustainability issues in construction in the UK and at the Earth Summit in Johannesburg.

In a letter to the PM, 12 young engineers participating in the Engineer for the 21st Century Inquiry project set up by Engineers for Sustainability*, urge him to set sustainability targets for industry. It says: 'As engineers we expect to be challenged. We know from our

training and experience that most of the solutions to unsustainable development already exist, and where there are gaps, we have the skills and the resourcefulness to fill them. Give us the targets and we will give you a way to reach them'.

The letter is supported by Sir Peter Williams, Chairman of the Engineering & Technology Board, Sir Robert May, President of the Royal Society and Professor Sir Alec Broers, President of the Royal Academy of Engineering.

The letter says: 'Your government has asked for a low carbon, resource productive economy. A new industrial revolution, but this time to be delivered in the context of social and environmental justice. This is sustainable development.

'But it won't happen unless you put pressure on our clients to specify for it. Just as health and safety is embedded into our contracts, standards and guidelines, so sustainable development should be.

The single most important thing you could do when you return from Johannesburg is to set sustainability related targets for government, business and industry.'

• *A report produced by Engineers for Sustainability detailing ways to ensure sustainable development can be downloaded from the web: (www.forumforthefuture.org.uk/publications). Further information on Engineers for Sustainability: email: k.ptt@forumforthefuture.org.uk

President visits ground zero on New York visit



A composite panoramic shot of Ground Zero, New York where the site has been completely cleared in preparation for any future construction (See report of the President's visit p6)

Inset: The President, Prof. David Blockley, with the General Manager of the World Trade Center site, Peter Rinaldi, P.E. of The Port Authority of New York & New Jersey



Stamp of authority

On 10 September, Royal Mail will issue a set of five commemorative stamps entitled 'The Bridges of London'. To mark this occasion, IStructE has commissioned an exclusive First Day Cover produced by CoverCraft.

The First Day Cover carries all five stamps, a photograph of the Millennium Bridge, and a unique hand-stamp, incorporating the new IStructE logo.

The total edition is limited to only 500. As a special offer, CoverCraft are offering the First Day Cover to readers of *The Structural Engineer* for a special price of only £9.50 (plus p&p). Visit the website at www.covercraft.co.uk, or email info@covercraft.co.uk for more details.



Imagining better futures

Robin Nicholson CBE, Senior Director, Edward Cullinan architects, will present the Hon. Fellow's Address at the Institution on Thursday 26 September 2002 at 18.00h.

Entitled 'The Owl and the Pussy-Cat: where shall we go?' he will explore the changing political and industrial context in which we work and try to imagine better futures. He will consider current and new forms of practice and the suitability of our educational programmes.

There will also be a review of a range of his practice's projects which illustrate some engagement with these issues and the working relationship with some of the leading UK engineers.



Robin Nicholson: exploring changing context

Eurocodes: new design guides on the way

A new series of Designers Guides to the Eurocodes Series is being published. The first of 15 such guides is available: *Designers Guide to EN 1990 Eurocodes: Basis of structural design* from Thomas Telford Publishing. 14 more are planned for publication during 2003, each costing £50:

• EN 1991-1.2, 1991-1.3 and EN 1991-1.5 to 1.7 Eurocode 1. *Actions on structures General rules and actions on buildings (except wind).*
• EN 1991-1.2, 1993-1.2 and EN 1994-1.2 Eurocode 1. *Actions on structures. Eurocode 3. Design of steel structures. Eurocode 4. Design of*

composite steel and concrete structures; fire engineering (actions on steel and composite structures).

• EN 1991-1.4 Eurocode 1. *Actions on structures: wind action.*
• EN 1991-2 Eurocode 1. *Actions on structures: traffic loads and other actions on bridges.*
• EN 1992-1.1 Eurocode 2. *Design of concrete structures; Common rules for buildings and civil engineering structures.*
• EN 1992-2 Eurocode 2. *Design of concrete structures: Bridges*
• EN 1993-1.1 Eurocode 3. *Design of steel structures: General rules for buildings.*

• EN 1994-1.1 Eurocode 4. *Design of composite and concrete structures: General rules and rules for buildings.*
• EN 1994-2 Eurocode 4. *Design of composite steel and concrete structures: Bridges*
• EN 1995-1.1 Eurocode 5. *Design of timber structures: Common rules and rules for buildings.*
• EN 1996 Eurocode 6. *Design of masonry structures.*
• EN 1997 Eurocode 7. *Geotechnical design.*
• EN 1998-1 Eurocode 8. *Design provision for earthquake resistant structures: general rules, seismic actions and rules for buildings.*

New York visit reveals extent of WTC disaster

The Ground Zero site where the World Trade Center towers once stood was the focus of the visit by Prof. David Blockley and Dr Keith Eaton to New York, on the first leg of their North American tour. They discussed developments on the site with Pablo Lopez and Andrew Pontecorvo of Mueser Rutledge.

Dr Eaton said: 'We were given a fascinating insight into what had been happening at the site. Our hosts, under the firm's principal engineer

George Tamaro (F), had been constantly involved at Ground Zero for several months. They had been called in as foundation engineers within a week of 11 September, and had spent several months examining the stability of the debris and the diaphragm wall all around the site, commonly known as the "bathtub". They had been key individuals in advising on the excavation of the site, with a great deal of care being needed before debris could be removed in order to



The President presenting a copy of the *Safety in tall buildings* report to the President of the ASCE Metropolitan Section, Maria Grazia Bruschi

maintain the stability of the original slurry walls.

'They showed us many fascinating slides' he continued, 'ranging from molten metal which was still red hot weeks after the event, to 4-inch thick steel plates sheared and bent in the disaster'. Other images explained the concerns of the New Jersey authorities over the PATH train tunnels (which had linked the WTC site to New Jersey across the Hudson River). These tunnels were leaking after the disaster, and might have allowed a tremendous amount of water to flood through into New Jersey. A 10m mass concrete plug was placed in the tunnels, just in case.

Ground Zero General Manager, Peter Rinaldi of the New York Port Authority (the owners of the site) joined them for a visit to view Ground Zero and explained what is currently happening. Dr Eaton said: 'He too had been closely involved for the past 11 months, and clearly these engineers are continuing to play a vital part of all the ongoing operations – and will continue to do so over the next couple of years'.

At a meeting with Les Robertson, the principal structural engineering designer of the World Trade Center towers, and his senior partner Saw-Teen See, at their offices close to Ground Zero, some of their key projects were discussed, including an amazing new tall building in Shanghai. 'We naturally discussed aspects of the World Trade Center towers, and the effects it had had on Les and the practice' said Dr Eaton. 'It was very sobering, and poignant, to see the view from Les's office, where the twin towers once stood.'

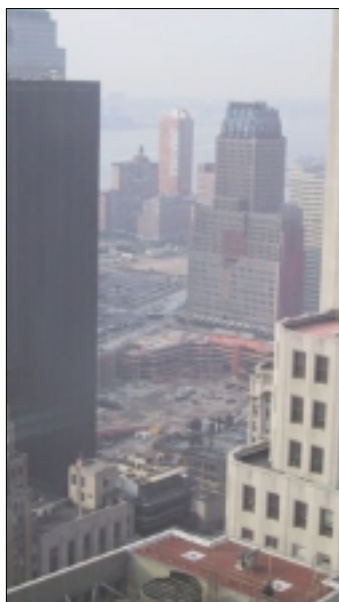
Risk discussion

At a joint technical meeting of the ASCE Metropolitan Section with IStructE members, chaired by Maria Grazia Bruschi, President of the Section, 40 people heard the President give a presentation on 'Risk, reliability and vulnerability'. According to Dr Eaton this was well received and resulted in considerable discussion with those present. 'The evening also provided an ideal opportunity to meet with some of our IStructE members in



Above: Prof. Blockley and Dr Eaton with Les Robertson, structural engineer for the World Trade Center twin towers, during their visit to his offices in New York

Right: The view of Ground Zero from the offices of Leslie E Robertson Associates, LERA



New York', he said, 'and everyone present was interested to see the copies of the new report into *Safety in tall buildings*.'

Other meetings about collaboration

Whilst in New York, they had other useful meetings with several IStructE members and with other organisations, some of which were kindly hosted and facilitated at the Arup offices. The registration process of professional engineers (PE) in New York State compared to that in the UK was discussed with the New York State Licensing Board for Engineers. Then they met officials from SEAoNY, the

Structural Engineers Association of New York. SEAoNY is just 7 years old, and currently has 450 members.

Since 11 September 2001, SEAoNY has taken on an important role, proactively co-ordinating activities of its members in the clean-up operation and the on-going assessment of buildings (see <http://www.seaony.org>).

Dr Eaton said: 'We exchanged information with SEAoNY about IStructE, and it was agreed that both organisations would benefit from a continuing collaboration.'

Sharing the Mackintosh dream

Charles Rennie Mackintosh is acknowledged as one of Europe's most influential architects. His 1901 competition entry for a House for an Art Lover was widely published and become a seminal design of the 20th Century, yet it remained unbuilt for 90 years.

At an Evening Meeting at the Institution on **Thursday 17 October**, Graham Roxburgh (F) tells the story of how he came to share Mackintosh's dream and how that dream was eventually realised in a Glasgow City Park. The full paper will appear in the 17 September issue of the Journal.

