

Monitoring infrastructure – what does the data show?

- challenges and sensing opportunities for new and ageing assets



7 February 2008, Manchester

Manchester United Football Club
Sir Matt Busby Way
Old Trafford Manchester M16 0RA

in association with



Background

There are many thousands of kilometres of linear infrastructure asset crossing the length and breadth of the UK. Many of these earthworks (embankments, cuttings, etc) and structures (bridges, tunnels, culverts, pipes, etc) are found in remote and inaccessible areas where traditional manual asset assessment techniques are difficult, expensive and potentially unsafe. Intelligent monitoring offers several potential solutions:

- Intelligent remote monitoring technology could provide streams of reliable, repeatable data at low-cost to improve maintenance and life of such structures
- Techniques such as stereo oblique aerial photography (SOAP) may help to prioritise repairs.

There are also opportunities for knowledge and technology transfer from military and other sectors incorporating intelligent monitors that can be used to proactively assess assets and their interaction with the surrounding environment during repair, upgrade or renewal.

Why you should attend

This event will provide an overview of the current challenges and barriers to and opportunities for the use of sensors to effectively monitor both point (e.g. electricity pylon) and diffuse (e.g. water pipelines) infrastructure assets.

This overview will be supported by a series of case studies that will outline how established and proven sensor technology has been integrated within other industries that has led to more robust decision-making in terms of maintenance and renewal.

There will also be opportunities for delegates to see first hand examples of sensor technology, and discuss with their developers how they work and possible future applications.

Programme

09.30	Registration and refreshments	12.10	Research developments in buried assets detection Jo Parker, UKWIR
10.00	Chairman's Introduction Introduction to the day and overview of the partner KTN's	12.35	(RuFUS), Re-use of foundations for urban sites Speaker tbc
10.10	Keynote presentation John Findlay, Balfour Beatty Infrastructure Services	13.00	Lunch, table top demonstrations and poster displays
10.25	Monitoring ageing assets within United Utilities Speaker tbc	14.30	SHM for total life-cycle management using multi-modal monitoring methods Nick McCormick, NPL
10.50	Asset owner perspectives Speaker tbc	14.55	Non-destructive testing of corrosion in reinforced steel Matthew Hocking/Roger Lambert, SciSite
11.15	Refreshments, table top demonstrations and poster displays	15.20	GPS monitoring of bridge reflections - Forth Road Bridge Gethin Roberts, University of Nottingham
11.45	Innovative monitoring technologies for underground infrastructure Kenichi Soga, University of Cambridge	15.45	Chairman's summary
		16.00	Close and tour of Old Trafford (optional)

Booking form **Monitoring infrastructure - what does the data show?(E8100)**

Contact name:

Email address:

Confirmation details will be sent by email.

Company name:

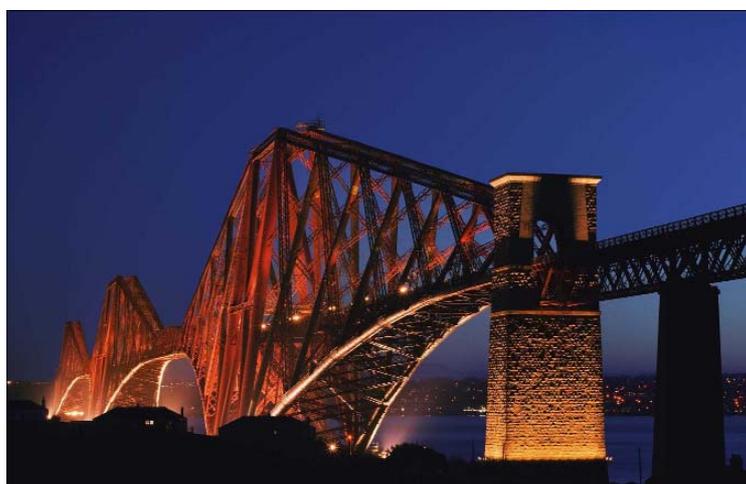
Position:

Address:

Post code

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Forth rail bridge at night courtesy of Network Rail

**Please photocopy this form and fax it to our Events team on +44 (0)20 7253 0523
or mail it to CIRIA , Classic House, 174–180 Old Street, London EC1V 9BP**

Additional delegates: Please photocopy this form for each additional delegate

TERMS AND CONDITIONS

Email confirmation of your booking will be sent out by CIRIA two weeks before the event.

CIRIA reserves the right to vary the programme and cancel the event in case of insufficient bookings.

Personal data is gathered in accordance with the Data Protection Act 1998. CIRIA will only contact you about products and services relevant to you and your organisation.

The Modern Built Environment Knowledge transfer Network (MBE KTN)



The MBE KTN is a single national overarching networking organisation

which exists to connect built environment stakeholders funded by DTI and managed by a consortium comprising BRE, BSRIA, CIRIA and Arup. Initially, the Network is focusing on three industry sectors – offices, healthcare and infrastructure. Its challenge will be to identify technologies that have the most potential to deliver a step-change in industry performance and client value in these sectors. For further details please visit the MBE KTN website at: www.mbektn.co.uk

Sensors and Instrumentation Knowledge Transfer Network



The Sensors & instrumentation KTN is a network covering the whole of the

UK's sensing community, from academics and large industries to small businesses, research councils and government departments. The Sensors & Instrumentation KTN embraces sensing in its entirety – from the principles of measurement and novel sensor technologies to instrumentation, deployment and data analysis. The National Physical Laboratory (NPL), the UK's measurement and standards institute, and Qi3, a company providing commercial expertise to technology-based corporations, manage the Sensors & Instrumentation KTN.

For further details please visit the MBE KTN website at: www.sensorsktn.co.uk



**sharing knowledge
building best practice**