

*Subsidence -
Improving
Industry Skills*

INNOVATION NEWSLETTER

CLAY RESEARCH GROUP

Formed in December 2003, the Clay Research Group (CRG) is exploring new developments in the field of root induced clay shrinkage. The academic team was recruited in 2004, and a research site was established at Aldenham School, North London, late in 2005. The site was instrumented in 2006.

The organisation is unique in the sense that it is (a) a virtual entity bound only by the shared interest of its members and (b) its findings are published 'live' to encourage the feedback of interested parties.

Hilary Skinner from the Building Research Establishment expressed the view that it was one of the widest ranging clay research projects in the UK when she spoke at the Annual Subsidence Conference at Aston University in 2006.

Current projects include exploring the use and benefits of electrical resistivity (Dr. Nigel Cassidy and our Ph.D. student, Glenda Jones), climate modeling and validation of the TDR sensor using the neutron probe (Dr.'s Derek Clarke and Joel Smethurst, Southampton University with the collaboration of Prof. William Powrie), comparison of the filter paper test and the oedometer using both disturbed and undisturbed samples (Hilary Skinner and William Powrie hopefully).

Commercially the CRG have developed a geological risk model for Addressology and Crawford and they are researching and developing the new breed of telemetry systems to measure building movement and soil moisture change.

They are also involved with developing the interpretative software to analyse the output from these devices for suppliers as well as the "virtual arborist and virtual geotechnical assessments" web based applications.

One of the most exciting aspects of the research has been in the field of BioSciences where the CRG has been researching the genetic expression of the stress response in plants, which is now better understood. Possible ground treatments are being investigated in the laboratory prior to being applied at the research site at Aldenham.

The project duration is 2 to 3 years depending on the results of the initial study and welcomes participation from everyone.

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www.theclayresearchgroup.org

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INNOVATION (n): a new idea, method, etc, a change.

The Innovation Group is one of four groups established by the Subsidence Forum to ensure proper focus is given to a critical area of industry effort, central to the overall objectives of the Forum.

Nick Deakin of Royal & SunAlliance chairs the group and Co Chair is John Wickham who works for solicitors Greenwoods. Since forming the group in March an Innovations Register had been established and published on the Forum website and a group of interested Subsidence Forum members established to ensure appropriate and expert input into the group's activities (see page 4).

The objectives of the group were reviewed at an inaugural meeting in London on July 20th – where it was agreed that one of the first aims of the group was to produce a quarterly Innovations Newsletter!

Innovation is not just about technical research, although reviewing and reporting on technology and R&D will obviously form a major part of the group's activities.

More importantly it is about the people who are involved in the day to day workings of an industry which manages up to 50,000 claims per annum worth upto £450m. Innovation touches every aspect of the claims process and brings with it changes which can have a direct impact on people's day to day working lives. It is important to understand what drives change and what our people face in adapting and managing change. *Continued.*



Members of the CRG attend the Aldenham site for the opening of the weather station donated by Marishall Thompson; L to R; John Hall (GAB Robins); Cyril Nazareth (In Front); Richard Rollit (Crawford), John Heuch (Duramen Cons.); Neville Tomblin (Aldenham School).

SUBSIDENCE INNOVATION WINS PRESTIGIOUS INDUSTRY AWARD

A joint venture between Marishal Thompson and Royal & SunAlliance has won the prestigious Claims Initiative of the Year Award at the 2006 British insurance awards held at the Albert Hall on July 5th.

The successful submission was drawn up jointly by R&SA's Andrew Buckley and MT's MD Paul Thompson. R&SA described the teamwork, which brought home the award as a "genuine partnership between an innovative external supplier and Loss Adjusting teams who can all share in that recognition."

Trees are the single largest factor contributing to clay shrinkage subsidence claims in the UK, this is increasingly driven by the impacts of climate change and is expected to cost the insurance industry up to £1.2 billion per annum by 2050.

R&SA has taken the lead in trying to reduce claims expense in the industry, using experts in different fields to set up this claims initiative and working protocols. This has reduced costs, reduced leakage, improved customer care and fostered a symbiotic relationship with charity Trees for Cities to promote "Right Tree, Right Place".

The R&SA approach uses progressive best practice techniques which emphasise rapid diagnosis of offending trees, innovative investigation procedures (which include DNA analysis) and a tightly-controlled contractor management system covering 165 national tree work contractors.

Since the initiative was established R&SA has made multi million pound cost savings arising out of proactive tree management and closure; increased recovery opportunities identified; reduction in reopened claims. Over 2000 high-risk tree owners have been provided with help and guidance about managing trees to prevent future damage.

R&SA and Marishal Thompson have built the UK's largest single point web-source for UK trees causing subsidence. R&SA has also established a long-standing relationship with independent charity Trees for Cities (www.treesforcities.org) and produced a pioneering urban tree planting guide called "Right Tree, Right Place"



The team enjoys the fruits of success at the Albert Hall; L to R Standing: Harriet Rich (Marishal Thompson), Bridget McIntyre (RSA Chief Executive), Nick Deakin (RSA); Seated: Paul Thompson (M D Marishal Thompson), Andrew Buckley (RSA)

INNOVATION (n): a new idea, method, etc, a change.

Continued from page 1 This first newsletter, together with the innovation register on the website, will hopefully give a taste of the wide range of innovation that is occurring across the industry, and an understanding of the impact change can have on all the people involved in the process.

The challenge for innovators is to develop and implement a process or piece of equipment that has a demonstrable benefit on all aspects of the subsidence claim. This benefit need not just impact on claim cost – but also seek to improve risk management; the claim timeline; customer experience; employees productivity, job satisfaction and working conditions; health and safety control; and predictability and certainty of the eventual claim outturn (such as reducing repair defects).

The first edition of this newsletter has a significant bias on clay/tree claims, which is appropriate given the recent increase in claims seen following the hot dry conditions of the early summer.

Managing complex and lengthy Event claims is seen as a key driver for change and articles on the tree root protocol and legal developments are included. Stephen Plante explains the work of the Clay Research Group, and to provide inspiration to future innovators the article opposite celebrates a recent industry success (apologies for some trumpet blowing here). Emphasising that innovation is not just about cost cutting John Patch provides a challenge to the industry as to how changing legislation and challenging market conditions requires a fresh understanding of underpinning.

Nick Deakin; nick.deakin@uk.royalsun.com

WHAT CAN UNDERPINNERS OF

Historically, the companies engaged in underpinning and other forms of structural repair have been innovative in terms of underpinning methods, processes, and in the development of specialist plant and equipment.

Innovation in this sector has always been high on many company's agendas and can represent up to 2% of annual turnover. This has generally been driven by the commercial needs of the contractors and the requirement to maximize profitability.

Customers, i.e. the Insurance Companies are always interested in innovation because that has largely been the method by which certain of the costs associated with underpinning are reduced.

This can apply to on-site methods as well as management processes.

The underpinning marketplace has been particularly volatile over a long number of years not just because of the vagaries of the British climate but also due to the policies of Insurers and their professional advisors, and this has led to the situation where some underpinners have relied upon innovation to give them the commercial edge over their rivals.

More recently, different drivers have appeared which are not motivated by the maximization of profit or the desire to reduce costs, although, indirectly, one or other or both can be achieved as a by-product.

Safety and the Environment have become synonymous with today's innovation agendas. Underpinning is an inherently dangerous and, sometimes, very environmentally unfriendly activity. This has been recognized by many of the underpinning contractors within the Association of Specialist Underpinning Contractors (ASUC) and they are doing something about it!

Notwithstanding the obvious moral issues, we cannot go around potentially killing or maiming people, nor can we go around abusing the environment in which we all cohabit. It costs money when we have accidents; it costs money when we make decisions which damage the environment and it is as incumbent upon us, the underpinners, as it is all others within subsidence repair to do something about it.

So what are we doing?

First and foremost the ASUC contractors are taking greater heed of the potential risks and attempting where-ever possible to design them out.

Does this involve innovation?

Indeed it does, either by developing brand new systems or maybe by doing something differently on a project-specific basis. Some examples will be outlined later on.

But what risks are we considering?

- Excavations – collapses.
- Restricted access working – slips, trips and falls.

WHAT DO WE MEAN BY

INNOVATION?

Innovation is a very commonly used word, so presumably we all know what it means. But

do we? What images does it conjure up? I would suggest these vary considerably from person to person depending upon their background, their line of work and their role.

In subsidence there has been a tendency to connect it with new technology. In this first newsletter, as food for future thought, I would like to suggest two things:

First, that we as an industry take a much wider view. Certainly technical development is an important ingredient but its only part of the overall picture. Innovation is all about coming up with good new ideas and then harnessing them productively. This might involve a new piece of technical kit, but it might equally involve a process improvement, a better way of communicating or maybe a brand new strategic concept. There's really no limit!

Second, that having come up with an idea, we put our feet back on the ground and apply a sense check. If developed and harnessed will it: save money, improve customer service or improve welfare or safety? If it won't do one or more of these things, and survive in a commercial environment, then in my book it's not truly innovative.

At Cunningham Lindsey it is our belief that innovation should continue to touch all aspects of the industry whether claims, underwriting or risk prevention. The Innovation Group provides the platform for different disciplines to share ideas and we are pleased to be a part of it

Nigel Barham, Subsidence Services, Cunningham Lindsey UK

OFFER BY WAY OF INNOVATION?

- Working in confined spaces – fumes and gases.
- Working with potentially dangerous equipment – injury to hands, feet and limbs.
- HAVS (Hand Arm Vibration) resulting in VWF (Vibration white finger).
- Other forms of injury.

One example of innovative thinking is the move towards robotic breaking of concrete or masonry or the remote drilling of hard material rather than the use of hand-held pneumatic tools to reduce the susceptibility to HAVS.

Another form of innovation is the contractor-designed use of drilled mini-piling methods to stabilize foundations rather than the use of labour-intensive and potentially hazardous large scale excavations.

We even have a duty to assist in the protection of our workforce from the harmful rays of the sun!

How can innovation help with environmental issues?

One of the main factors which affects the environment is the waste of the earth's natural resources. Designs that waste those resources should be eliminated; designs that embrace factors of safety where none are needed or which are too high should also be eliminated.

Excavations should be minimized to a) reduce the amount of material taken offsite, and b) the amount of material brought back to site, often in the form of concrete can also be reduced, thereby minimising the use of natural resources and the number of lorry movements.

It is of course entirely possible that innovative methods and processes could cost customers more, not less, thereby flying in the face of history.

The overriding concern has to be however the need to ensure improved working environments for our workforce which, make no mistake, is a dwindling workforce of skilled people. We will never attract people into the industry unless we tackle these issues head-on and that means taking innovation very seriously.

Innovation within underpinning costs money and customers will need to come to terms with the fact that costs will go up.

Maybe there will be an event year this year, maybe not, however, one thing is for sure if we do not enhance both the working conditions of our labour-force and improve our environmental record, there will be no underpinning done in the UK because there will be no systems to use and nobody to do them!

The ASUC membership is the cream of the underpinning contracting industry and is more than capable of improving and enhancing what they do – the Subsidence Forum must encourage new ideas and innovation if long-term benefits are to be enjoyed by all, including policy-holders.

J C W Patch, Director, Roger Bullivant Ltd

Legal Update

MRS MARY TERESA M EILES -v- LONDON BOROUGH OF SOUTHWARK

The Claimant's property was a Victorian mid-terrace house in London with a three-storey rear addition. The Defendant's silver birch was located at a short distance from the front of the property. Proceedings were issued in September 2004 claiming damages in nuisance and/or negligence on the basis that the encroachment of the tree roots had caused subsidence.

The Defendant argued that the damage to the rear of the property was not foreseeable and claimed that damage to the rear was not caused by its tree but by vegetation (ivy) owned by the Claimant.

Ramsey J in the TCC London was asked to consider the level of influence of the Defendant's tree and whether the main part of the house was rotating towards the front and/or the tree (as argued by the Claimant) or whether the rear addition was rotating away from the main part of the house (as suggested by the Defendant).

The Claimant's mechanism of causation was preferred. The Judge considered that the ivy had potential for local desiccation in the area of the rear wall, but would extract little water compared with the birch tree. The Judge considered that damage at the rear of the property, which was some distance from the front was caused by the birch tree. He found that the front of the property rotated forward during summer as a result of shrinkage caused by the tree and that this caused tension in the rear of the main house because it was resisting rotation.

The Court accepted that there was significant damage to the front of that property to justify the recovery of the cost of underpinning at the front of the house and did not accept there would need to be damage at the front in excess of category 2 in accordance with the BRE Digest 251 to justify the underpinning. The Court considered that the need for underpinning at the front also justified a claim for alternative accommodation whilst repair works were undertaken.

Damages of £76,005.84 were awarded (together with interest), inclusive of general damages for distress and inconvenience. The Court decided that compensation of £1,000 should be paid for the five year period from 1998/2002 during which there was the physical inconvenience and discomfort of (1) having a house which was cracking and (2) having a house invaded by various people investigating the cracks. £1,250 was considered appropriate to reflect disruption in 2003 and 2004, taking into account the need to move out of the house, settling into alternative accommodation and moving back to a house which had been the subject of remedial work.

The damages awarded were higher than that which the Claimant had offered to accept approximately 5 weeks before trial. The Defendant did not accept the settlement offer. Indemnity costs were awarded against the Defendant who was also ordered to pay interest on damages at an enhanced rate. Plexus Law acted for the successful Claimant.

Anna Norrie at Plexus;
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TREE ROOT PROTOCOL UPDATE

There has been a general movement to increase the co-operation between building insurers and local authority liability insurers in dealing with tree root claims to produce a Joint Mitigation Protocol. The Subsidence Forum has worked with the Property Claims Forum (PCF), which represents a large group of building insurers and the ALARM Special Interest Group (the Tree Forum) to produce a Joint Mitigation Protocol for dealing with tree root claims, approved by both bodies. The Tree Forum includes local authority arboriculturalists, insurance officers and risk managers, local authority insurers, loss adjusters, as well as independent engineering and arboricultural expertise.

The Joint Mitigation Protocol may be particularly relevant given the increased likelihood of tree root subsidence problems in coming months.

Essentially, the Joint Mitigation Protocol sets out a relatively basic framework and timescale for progressing and settling claims for tree root subsidence, including guidance as to the level of evidence which the building insurer might be expected to provide to the local authority on any claim. The aim is to minimise the time and cost of settling tree root claims. To facilitate this it encourages early exchange of information, to allow each party to consider the evidence and information within certain timescales, and undertake appropriate mitigation.

The Joint Mitigation Protocol is currently being trialled by three London boroughs – Southwark, Barnet and Islington - to see how it works in practice. If necessary amendments can be made as teething problems emerge. If these trials are successful, then the aim will be to invite other local authorities to participate, so that the Joint Mitigation Protocol becomes applied generally.

Full details of the joint mitigation Protocol are available on the Subsidence Forum website. Should you require further information or have any comments on its content or use please contact **John Parvin of Zurich Insurance** at john.parvin@uk.zurich.com or **Peter Osborne of Treesubs Ltd** at treesubs@hotmail.com

Remote Monitoring - The Future

SP Property Services has been assessing and evaluating the value that 'Wireless Sensor Network' (WSN) technology can offer the Building Insurance Industry.

As the largest independent supplier of monitoring services to the insurance market, SPSS view wireless technology as the future way forward and is pleased to announce the imminent launch of a suite of 'ground breaking' intelligent wireless sensors to monitor the movement of any building or structure. This 'cost effective' breakthrough is possible due to developments in 'm2m' (machine to machine) mobile telephony hardware, the enablement of the digital transfer of data via a GPRS gateway and the use of 'Zigbee™' radio wave technology designed by leading U.K. telemetry specialist BOX telematics Ltd.

The benefits to the industry will be significant. Real time accurate remote monitoring via a web interface will result in pro-active claim handling and opportunities to reduce timescales and hence costs and also enable claim re-engineering possibilities for customer focused and innovative thinking insurance companies and their Loss Adjuster/claim handling partners.

SPSS along with their alliance partners, Box telematics Ltd and Orange, will be showcasing this technology on the 10 October at the Subsidence Forum Training day. **Graeme Phipps; graeme@sppropertyservices.co.uk**

Subsidence Forum Innovations Group - List of members who have pledged support As at 1st Sept 2006.

NAME	ORGANISATION
Nick Deakin	Royal and Sun Alliance
John Wickham	Greenwoods
Neil Curling	Halifax
Steve Wright	Halifax
Paul Thompson	Marishal Thompson
John Farthing	CILA
Graeme Phipps	SP Property Services
Richard Stow	EnviroScience Research
Richard Whybrew	Gaston Whybrew
Uma Ramani	Davies Lavery
Matthew Rogers	Keoghs
Brian Butcher	Richard Jackson Plc.
Richard Barlow	Browne Jackson LLP
Gary Ekpenyoung	Browne Jackson LLP
Anna Norrie	Plexus Law
Tim Roberts	Plexus Law
Jon Heuch	Duramen Consulting Ltd.
Stephen Plante	Archer Equitable Ltd.
John Patch	Roger Bullivants (ASUC)
Nigel Barham	Cunningham Lindsey
Richard Rollit	Crawford and Company
John Parvin	Zurich Insurance
Tom Griffiths	RTG Expert Services Ltd.
Richard Thomas	RTG Expert Services Ltd.
Neil Foster	Assured Building Services
Craig Cook	RBS Insurance
Don Davis	RBS Insurance

Any readers who wish to contribute to the group's activities are invited to contact the Subsidence Forum via the website or e-mail nick.deakin@uk.royalsun.com.

RECOMMENDED WEBSITE

The Movement for Innovation M4I was formed in November 1998 to implement, across the whole of the construction industry, the recommendations contained in The Government Task Force's report 'Rethinking Construction'.

The report proposed the creation of a 'movement for change' which would be a group of dynamic people inspired by the need for change. Since the beginning of 2004, it has been a part of Constructing Excellence group. M4I identified key drivers for change in construction.

Committed Leadership • understand client's needs, refocus or restructure the business, drive change through the organisation from the top

Focus on the Customer • education, refine customer's functional needs, measure performance satisfaction

Respect for People • site conditions, fair wages, health, safety, training, improving image, attracting the best, no-blame culture

Integrated Processes and Teams • planning, procurement, delivery, whole life performance, feedback

Quality Driven Agenda • zero defects, right first time, delivery on time / budget, innovation, adding value

For further information visit

<http://www.constructingexcellence.org.uk/>

INNOVATION
NEWSLETTER

NEXT QUARTERS NEWSLETTER

Report on the BRE day – feedback on the Innovation Group workshops