

The Clay Research Group

RESEARCH AREAS

Climate Change ♦ Data Analysis ♦ Electrical Resistivity Tomography
Time Domain Reflectometry ♦ BioSciences ♦ Ground Movement
Soil Testing Techniques ♦ Telemetry ♦ Numerical Modelling
Ground Remediation Techniques ♦ Risk Analysis
Mapping ♦ Software Analysis Tools



The Clay Research Group

June 2012

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High Claims - Low PI
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Aston Program & Booking Form

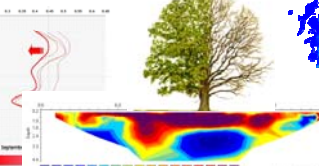
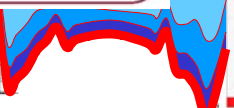
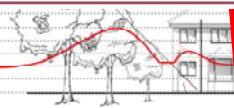
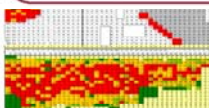


The Annual Subsidence Conference
20th June, 2012

*For details of the programme and how to book,
see last page.*

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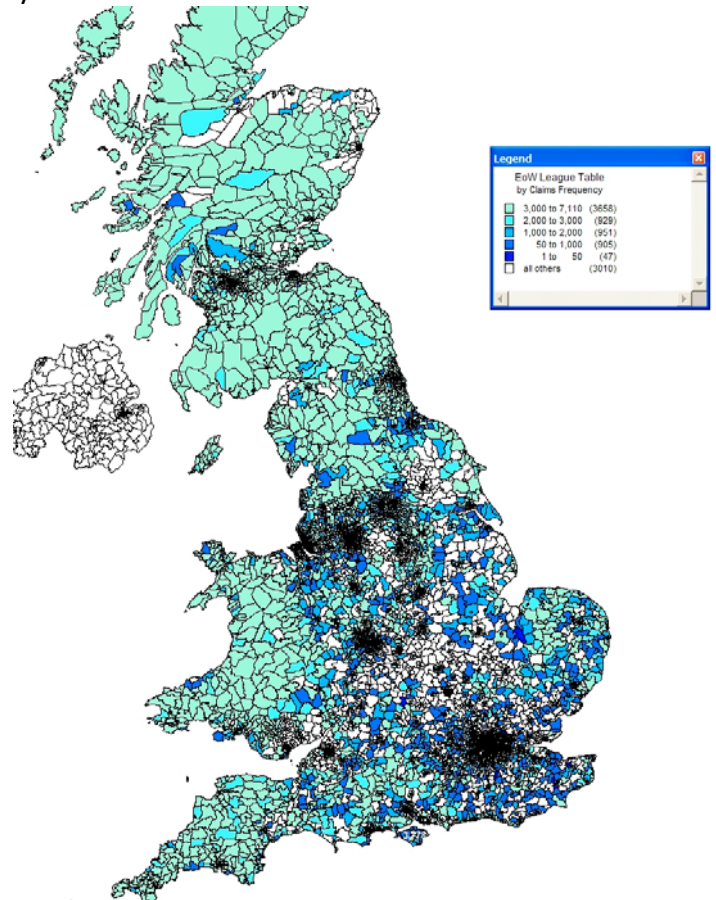
www.theclayresearchgroup.org
clayresearchgroup@gmail.com



ESCAPE of WATER

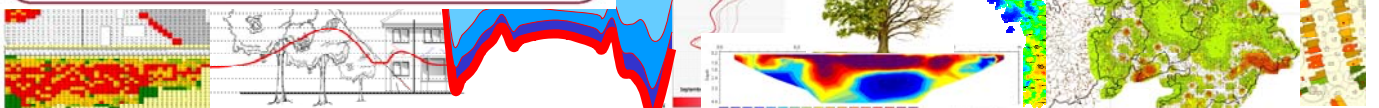
Subsidence Related to Escape of Water

Damage due to water flowing through non-cohesive soils accounts for around 25% of valid subsidence claims, variable by year. The percentage is less in a dry year.



Due to the low permeability of clay soils, subsidence due to escape of water (leaking drains etc.) are less prevalent in cohesive soils, other than where erosion/softening occurs with shallow drift deposits.

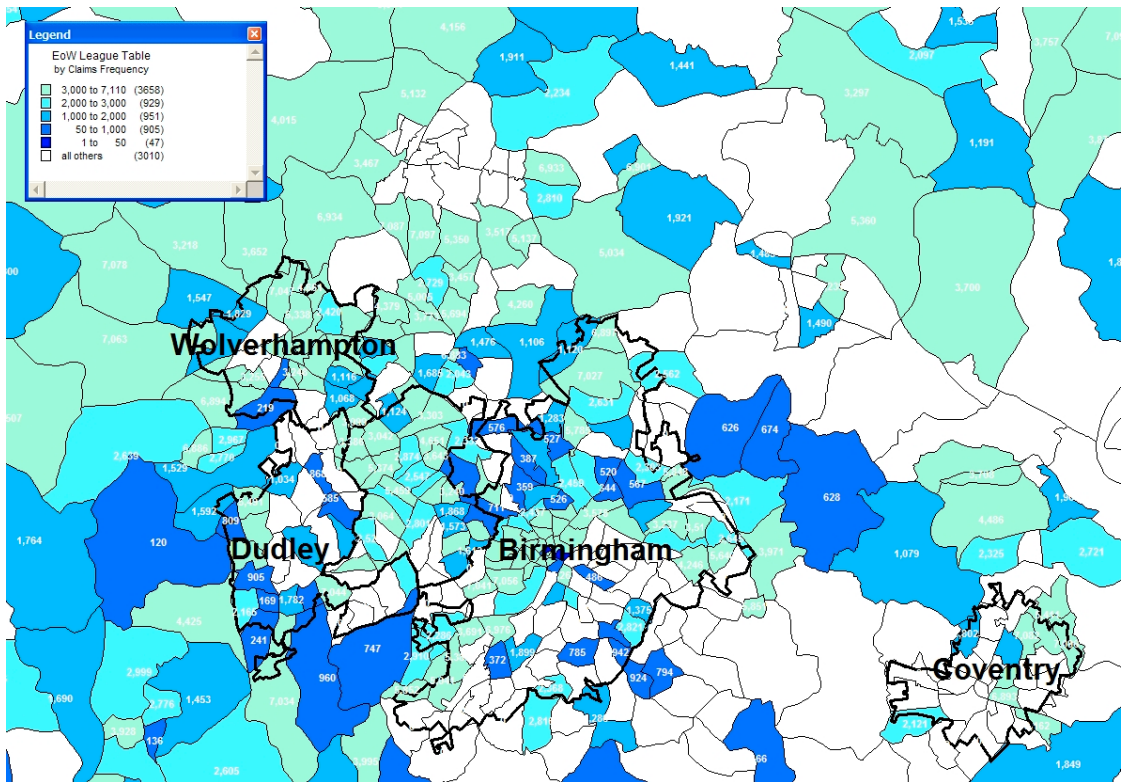
The above map of the UK reveals the league table of risk. The legend plots the top 50 postcode sectors shaded dark blue, and sectors becoming lighter with reduced risk. All expressed as claims frequency.



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HIGH CLAIMS & LOW SOIL PI

~ WEST MIDLANDS ~

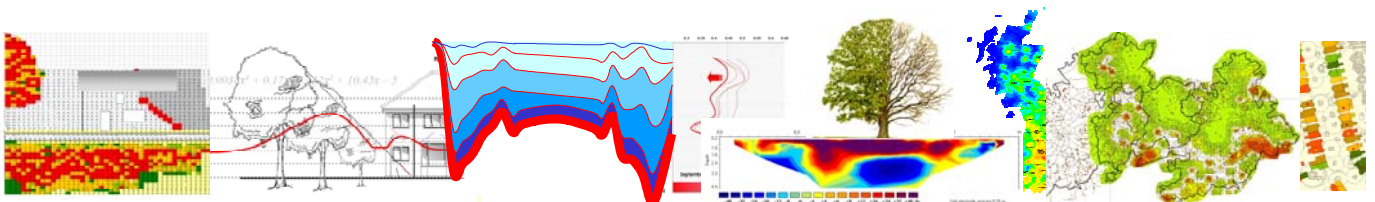


We often associate high claim frequencies with clay soil, but there are instances when they occur on soils with a low PI, and usually on sandy or heterogeneous soils. These risky sectors are plotted for the West Midlands (above) and for other cities on the following pages.

Birmingham has outcropping Mercia Mudstones to the south east, often with a high smectite content. The absence of escape of water claims in this area is reflected by the number of white sectors. White sectors indicate either a low claims frequency or high numbers of clay shrinkage claims.

The white numbers are the position in the league table of risk associated with this peril (i.e. subsidence due to water escaping from a drain or service pipe) with '1' being the highest risk and shaded darker blue. A score of 624 places it in 624th place in a table of 9,500 sectors.

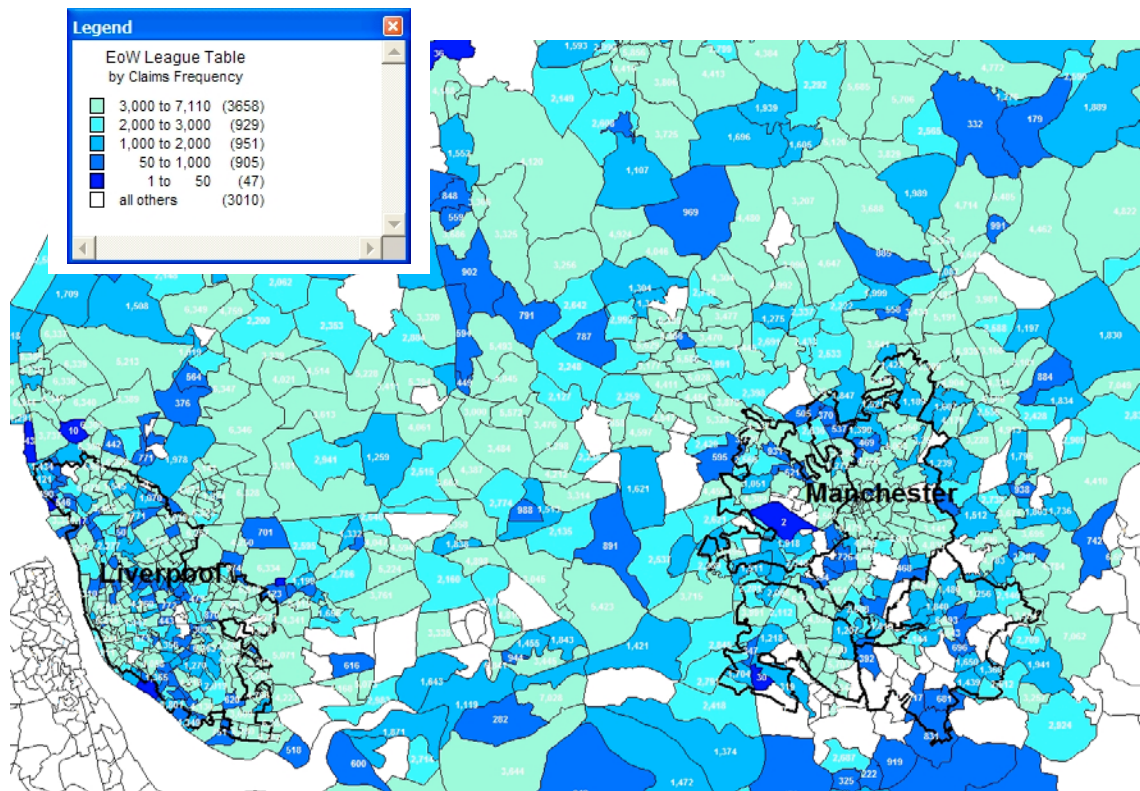
The legend records that there are 47 postcode sectors with a 'league table' ranking of between 1 – 50 for example, suggesting some sectors share similar scores.



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HIGH CLAIMS & LOW SOIL PI

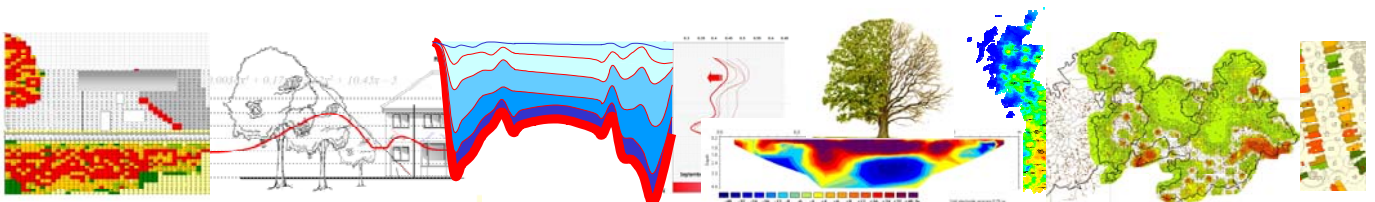
~ NORTH WEST ~



There are larger numbers of subsidence claims caused by water escaping from drains or water service pipes to the North West, as can be seen by comparing the above map with others – particularly the map of London on the following page.

The maps act as a proxy for the geology, linking high numbers of ‘escape of water’ claims with non-cohesive soils.

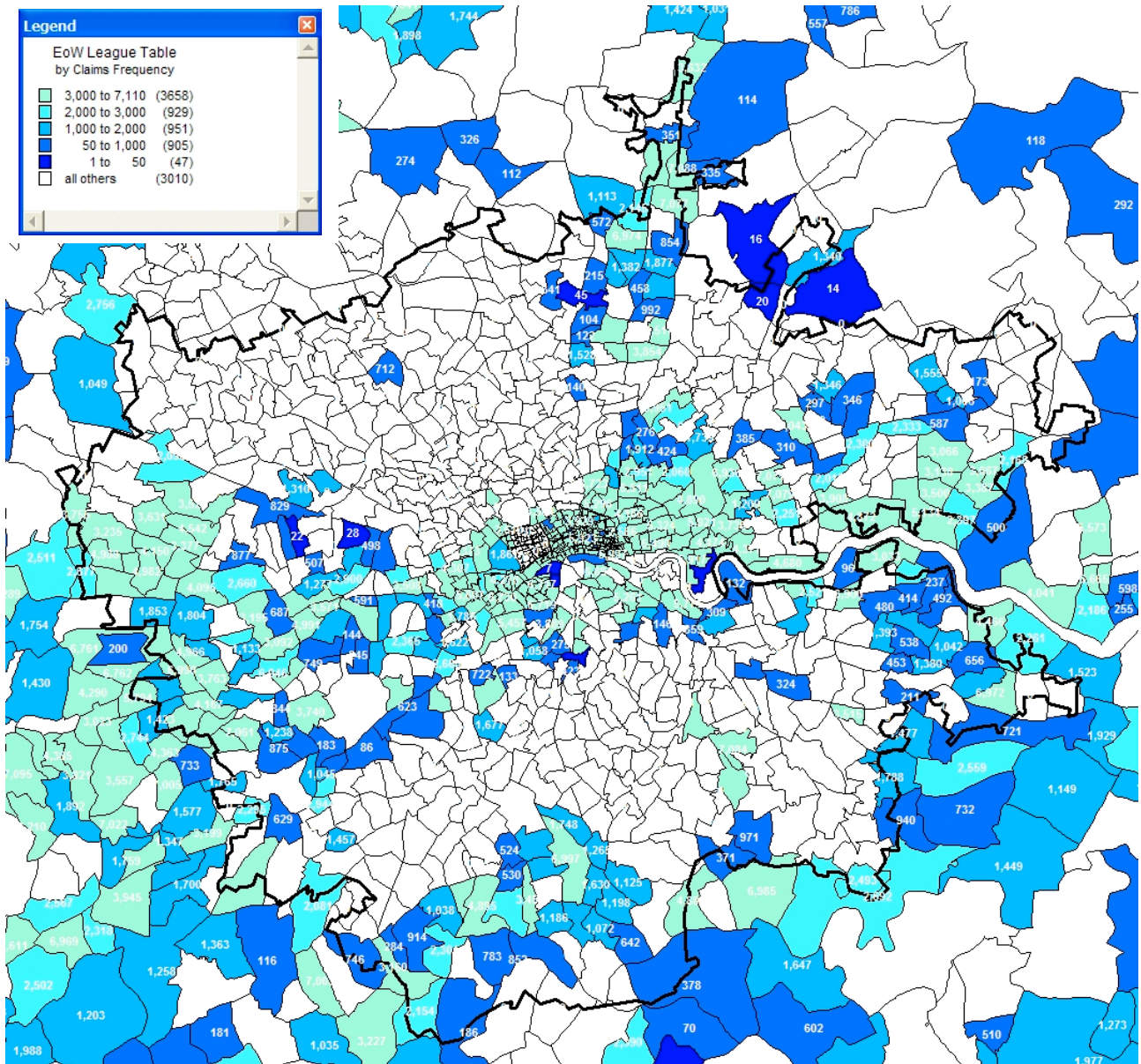
The underlying data is already being used in Triage applications to assess the probability of whether a claim is likely to be valid or not, and the likely cause. It is also incorporated into subsidence risk models used by underwriters to understand both frequency and severity (cost).



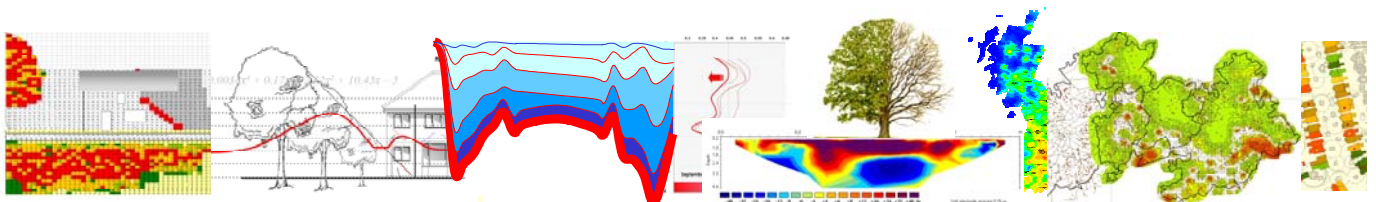
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HIGH CLAIMS & LOW SOIL PI

~ LONDON ~

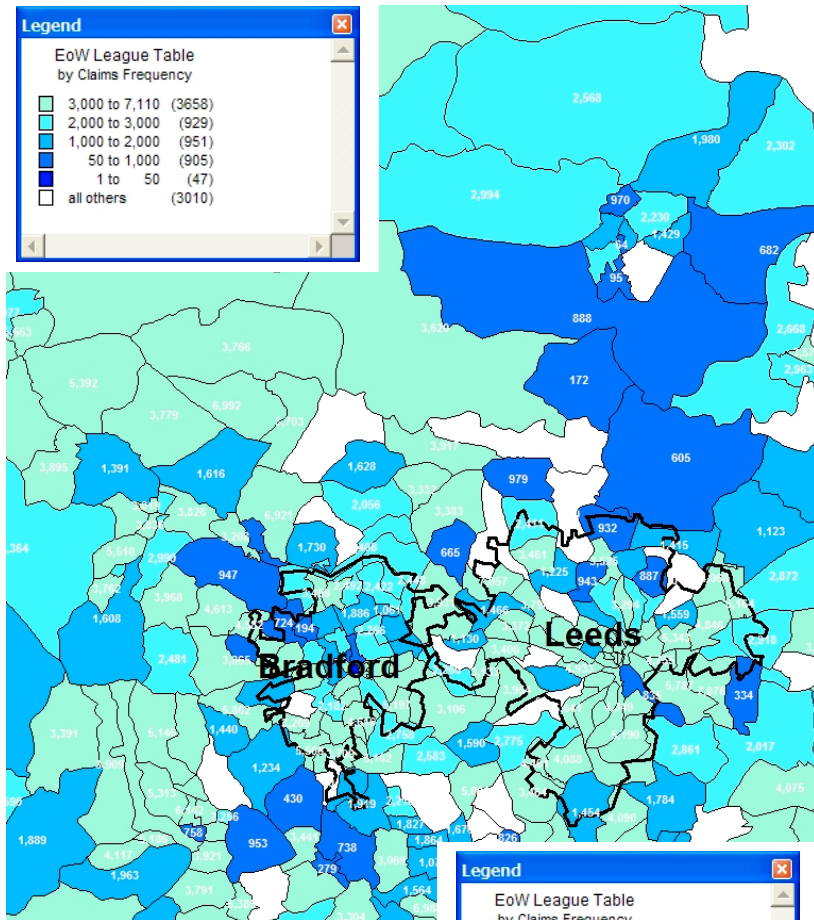


High 'escape of water' claims experience adjoining the Thames and the river Lea, reflecting the geology. The low risk sectors (shown white) are predominantly outcropping clay, or soils with a high clay fraction. They might also be sectors with a low claims frequency and comparisons with other maps (geology and claims frequency) enables us to distinguish risk by sector.

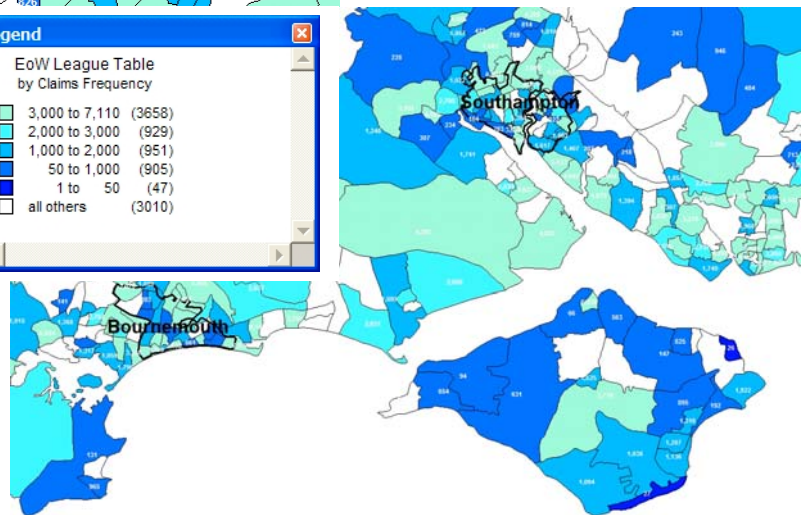


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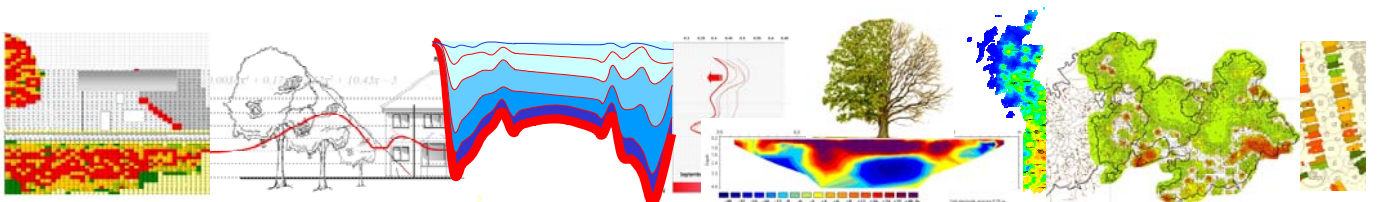
HIGH CLAIMS & LOW SOIL PI



LEEDS & BRADFORD

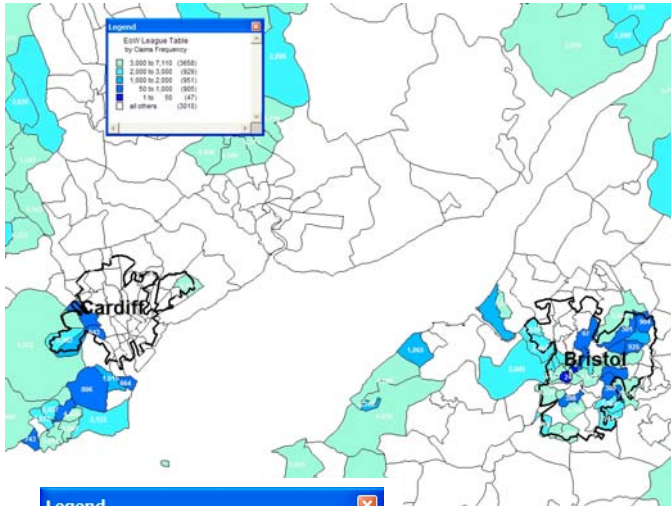


SOUTHAMPTON,
BOURNEMOUTH AND
THE ISLE OF WHITE.

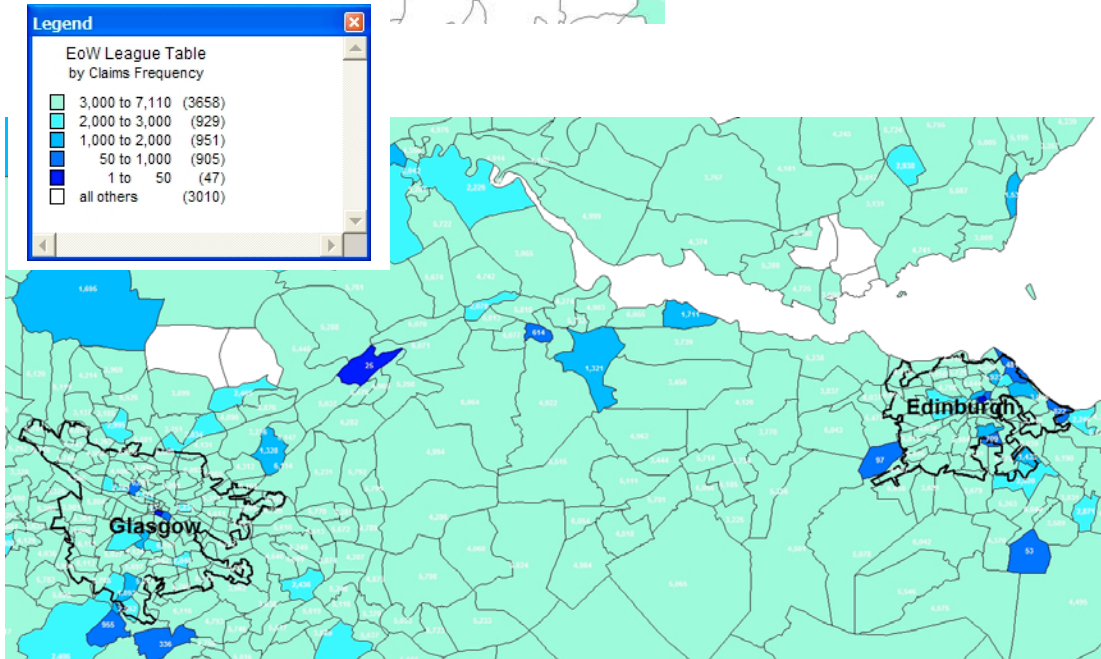


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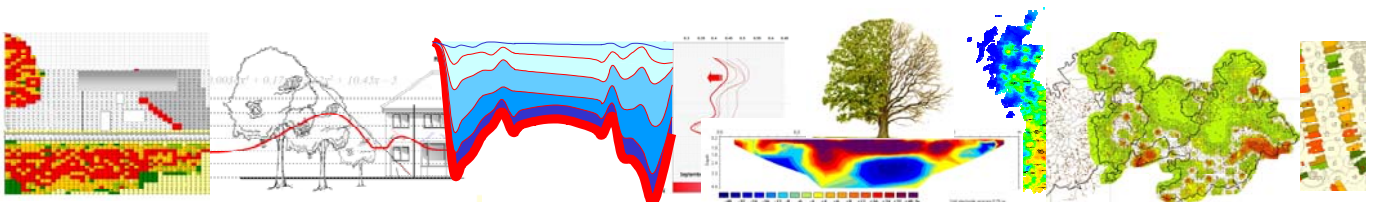
HIGH CLAIMS & LOW SOIL PI



BRISTOL & CARDIFF

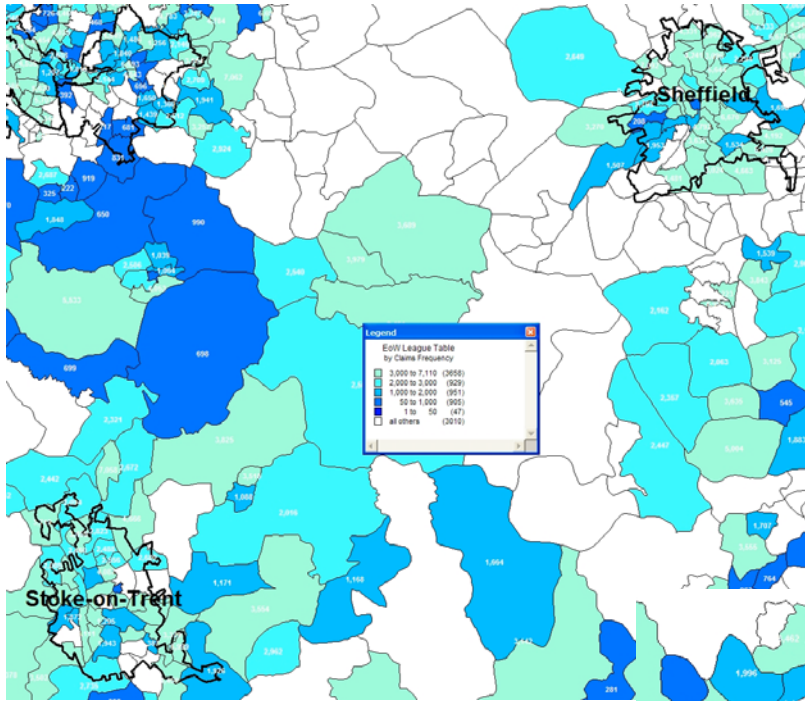


GLASGOW & EDINBURGH

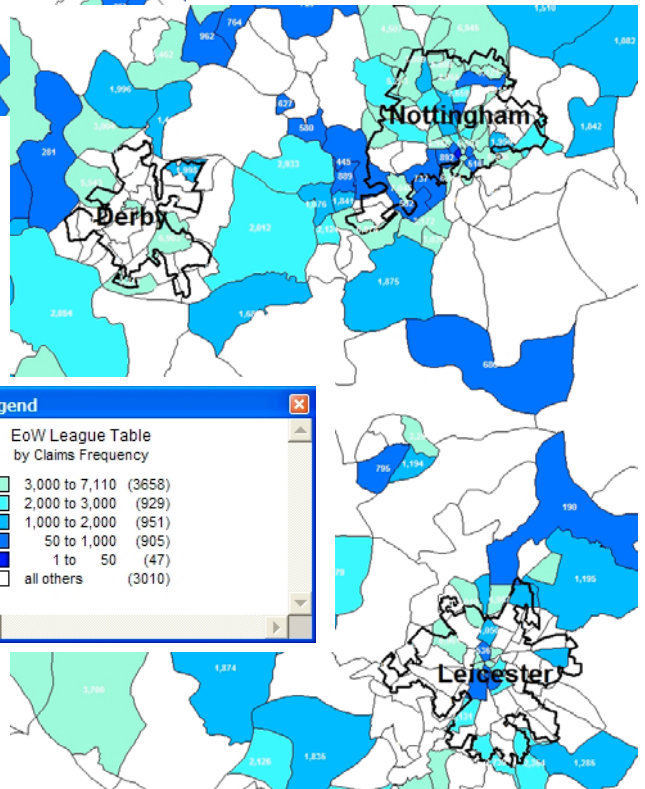


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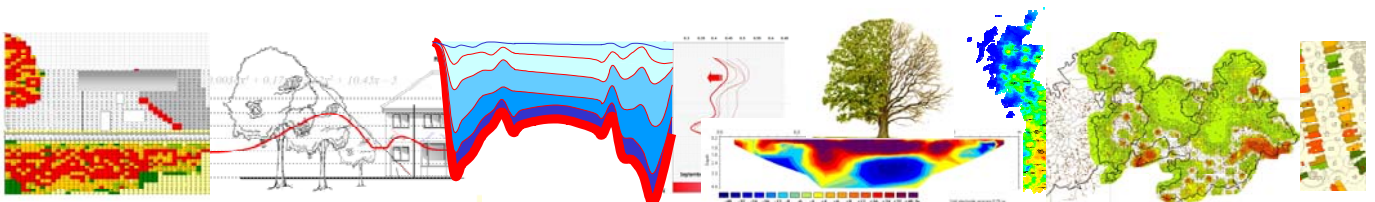
HIGH CLAIMS & LOW SOIL PI



SHEFFIELD & STOKE-ON-TRENT



DERBY, NOTTINGHAM AND LEICESTER





Aston CPD Centre BIRMINGHAM

presents a One-day Conference on Wednesday 20 June 2012
at Aston University

SUBSIDENCE Topical Issues 2012

- 09.00 - 10.00 Registration and coffee
- 10.00 - 10.15 Opening by Chairman: RICHARD ROLLIT, Innovation
- 10.15 - 10.50 The Council as Tree Owner- or, seeing things from other side.
Paul Harris, Chartered Engineer
- 10.50 - 11.25 *Rehydration: Case Studies*
Maciek Kawecki, Director, Subsidence Management Limited
- 11.25 - 11.40 *Coffee*
- 11.40 - 12.15 *An Analysis of Clay Soil, Climate and Plant Interaction as this Relates to Claim Numbers 1975-2011 – Mike Lawson, OCA*
- 12.15 - 12.45 Discussion
- 12.45 - 14.00 *Lunch*
- 14.00 - 14.15 *Changes to the TPO Legislation*
Margaret MacQueen, OCA
- 14.15 - 15.50 *Recent Legal Developments and the Implication for the Subsidence Claim Industry.*
Rachel Bolt, Freeth Cartwright & Ian Brett-Pitt, Innovation
- 15.50 - 16.05 *Tea*
- 16.05 - 16.30 *CRG Update. Rehydration using the Intervention Technique and EKO*
Richard Rollit, Innovation
- 16.30 - 17.00 Discussion
- 17.00 - 17.30 Tea & Disperse

(Directed by Stephen Plante, The Clay Research Group)

For conference availability: enquiries@astoncpdcentre.co.uk Telephone Enquiries: 0121 204 3606
 Fax: 0121 204 5079 Website & Mailing Subscription: <http://www.astoncpdcentre.co.uk>
 Our conferences are intended to contribute towards the CPD requirements of the relevant professional institutions.
 The views expressed at the conference are personal to the speakers and are not necessarily those of Aston CPD.
 Conference Organiser: Dr M Sadeghzadeh 07788947658
 Please note the programme is subject to change without prior notice

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correspondence to: Aston CPD Centre, Aston House, 6 Greville Drive, Birmingham B15 2UU

Please reservePlace(s) at the course, (subject to terms & conditions) Subsidence: Topical Issues – 20.6.12

Delegate Name(s): Company:

Address:.....

Post Code: Email Address: Tel:

Have you any dietary, access or other requirements? YES/NO if YES please state

Do you wish to be invoiced? (VAT exempt) YES/NO Purchase Order No:

Invoice address if different from above:

.....

Cost £195 per delegate, VAT exempt, covering attendance, papers, lunch and refreshments during the day.
(Cheques should be made payable to Aston CPD)

