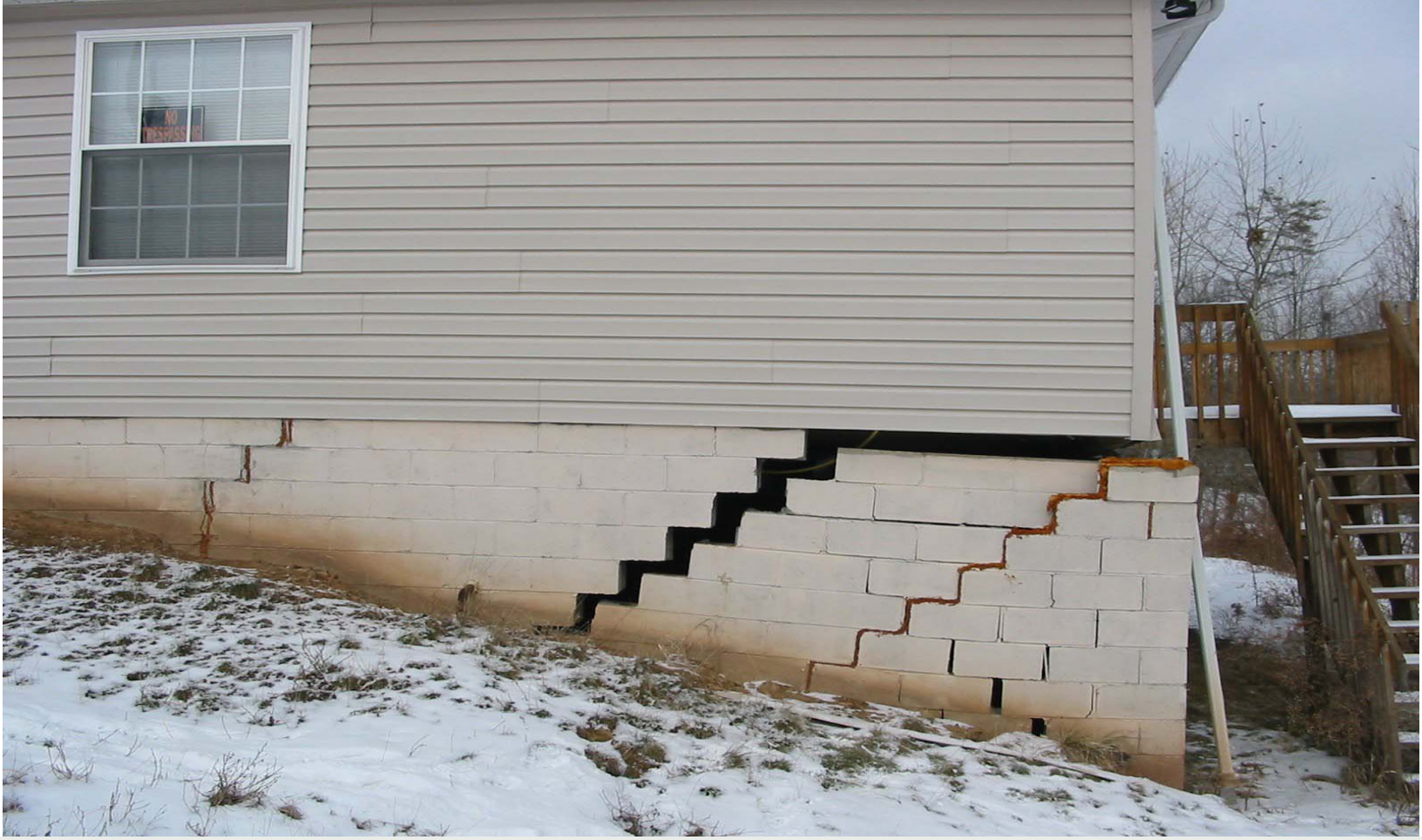

Subsidence.The value of geospatial data

Subsidence is the second most important hazard to property insurers in the UK, with around £300 million a year spent on subsidence related damage. Gill Dickson, Infoterra Ltd and Alex Finch, Crawford & Company explain

Subsidence can be caused by certain types of soils, for example clay shrinks and swells according to moisture content. It can also be exacerbated by the effect of trees extending their roots in search of water during prolonged dry periods and by leaking drains washing away the ground under the foundations of buildings. Most of Great Britain has the potential to be affected by swelling and shrinking clay, although the problem is more widespread in the south and east of England where clay rich layers are near the surface. That of course, also coincides with some of the most populous areas.

Global climate change will continue to cause significant change to our weather patterns in the UK. It is predicted that the average UK summer temperature could be up to 2.4˚C warmer by 2050. This may cause increased clay shrinkage and additional root spread from vegetation seeking moisture. Equally, an increase in flooding events which put additional pressure on drains could lead to more erosion of sub-foundation material. Unless significant action is taken in the planning of new property development to ensure that foundations are designed to cope with periods of drought and that only certain types of tree are planted close to buildings, the cost of subsidence claims could double by that time, according to the Association of British Insurers - A Changing Climate for Insurance, June 2004.

Quantify the risk

Increasingly, insurers are making an assessment of subsidence risk to a property in order to determine their exposure - by consulting the geological profile of a location and viewing imagery to show the proximity of vegetation - before issuing a quotation. As insurers become increasingly aware of the power of address specific information, they will be better able to understand their risk exposure and to price insurance policies accordingly. For some property owners in low risk areas, this could bring good news as insurers compete to offer the cheapest cover.

But what happens if the worst occurs and the ominous diagonal cracks appear? The sooner the insurer is informed, the sooner an investigation by a claims management specialist can begin. They will look into the cause of the damage and what remedial action can be taken.

Investigate the claim

Crawford & Company has been providing claims management services for more than fifty years and has a reputation for high quality solutions bringing together both local expertise and global best practices. As the world's largest independent provider of claims management solutions to insurance companies and self-insured entities, with a global network of more than 700 locations in 63 countries, they are able to deliver services in all principal commercial languages and across numerous technical disciplines. Crawford National Building Services provides the efficient and rapid settlement of complex subsidence related claims together with surveying and sophisticated repair expertise.

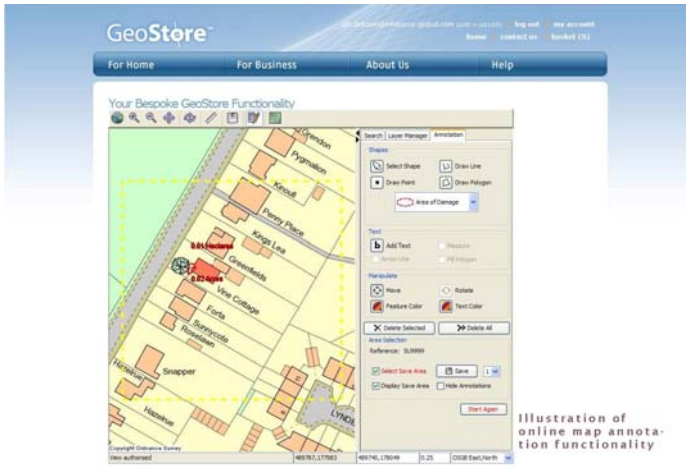

Illustration of online map annotation functionality

Crawford's award winning National Subsidence Unit offers state-of-the-art claims solutions for subsidence investigations. In order to mitigate the significant annual spend on subsidence related damage, Crawford has developed a triage system and methodology to model ground movement resulting from root induced clay shrinkage, and handles all manner of related subsidence investigations and claims. An estimated £10 million of annual industry spend on subsidence is attached to the investigation process alone, including digging holes and testing soils. These measures are expensive, time consuming and inconvenient. Using the award winning VISCAT, a computer-based modeling software tool, the Crawford's team can estimate the influence of varying soils, trees and changing climatic condition rapidly at their desks. This costs a fraction of the price of on-site investigations.

See and understand

To further improve the cost effectiveness of their services, Crawford turned to Infoterra to help strengthen the communications process between their site surveyors and their clients – the insurers. We often use the term "I see" to mean "I understand" illustrating just how important visualization is in conveying information. Realising that the ability to understand, not only the location of a map but the context of the surrounding vegetation from an aerial photograph, delivered significant value, Infoterra began developing a powerful browser-based desktop survey solution for Crawford.

The Infoterra solution now supports the activities of Crawford's National Building Services, enabling their surveyors to gain a comprehensive geographical view of all claims.
This web-based solution allows surveyors to validate a specific address – anywhere in GB - and then call up aerial photography and mapping (OS MasterMap®) to assess a subsidence claim, for example, viewing the proximity of trees to the property. They can include, on the aerial photography or map, detailed measurement and annotation using the solution's online editing suite. Results can then be saved for inclusion in Crawford's reports for insurers, as well as providing site surveyors with clear visual instructions as to which specific features need further investigation.
"We now have a service which provides our subsidence claims team with a source of risk intelligence, allowing us to equip our site surveyors with essential claims information, which saves us valuable time. In addition, because this is a web-based service, our users don't need to have any specific GIS software or expertise, and we don't need to carry out expensive training - it is intuitive. It's this combination of relevant risk intelligence, ease-of-use and a usage-based charging model that makes this such a cost-effective solution for us", commented Alex Finch, Managing Director of Crawford National Building Services.
"We've also been impressed by Infoterra's expertise in establishing suitable licence agreements for the data and of course the implementation of a flexible pay-as-you-use service, " he continued.
Crawford's pay-as-you-use service is backed by the power and sophistication of Infoterra's major geospatial data hosting centre. This ensures that claims management queries are always supported by the latest geospatial data, which is continually refreshed as part of Infoterra's ongoing renewal process.
"Infoterra clearly demonstrated the value of geospatial data to our business" stated Finch.

Map the future

Global climate change is likely to cause increased risk of subsidence across the whole country. For the insurance market, this means looking at risk mitigation at both ends of the equation.
Using the mix of intelligence from geology, topography and imagery for a specific address, underwriters may reduce exposure with better pricing. In an increasingly competitive market this could benefit property owners in low risk areas.
When a claim does occur, as illustrated by Crawford, geospatial data enhance risk intelligence and streamline processes so that the most rapid and cost effective remedy can be offered.

Gill Dickson, Infoterra Ltd and Alex Finch, Crawford & Company
www.infoterra.co.uk/applications_insure.php