Land instability is a hidden hazard that can affect any home. The ground beneath us is constantly shifting due to natural and man-made influences. As well as the natural geology of an area, mining, tree planting, water abstraction, and tree removal can all cause everyday instability. After the summer of 2003, there was a sharp increase in natural land instability related calls to insurers. This was mainly caused as the water table dropped and dried out the clay soils on which the houses affected were built. In the 1970’s there was only £5m of land instability claims, in 2000’s the total claims are pushing the £400m level. (Source: - Online Home Insurance).

### Introduction

**What is this Data?**

The collective name of this data is called Geosure and it is made up of six layers of information that cover the specific geological types where land instability can occur. The data set covers Great Britain and is designed to be site specific, and, unlike its predecessors it is no longer postcode based. The themes are as follows: -

<table>
<thead>
<tr>
<th>Layer</th>
<th>Theme</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Potential for Landslide Ground Stability Hazards</td>
<td>A landslide is the gravitational movement of rock/soil. A change in drainage or an increased load due to the weight of a new structure could trigger a landslide in a previously stable area.</td>
</tr>
<tr>
<td>2</td>
<td>Potential for Ground Dissolution Stability Hazards</td>
<td>Soluble rocks such as limestone/ chalk/gypsum/salt can dissolve and create caves, cavities, or uneven ground surface.</td>
</tr>
<tr>
<td>3</td>
<td>Potential for Compressible Ground Stability Hazard</td>
<td>Weak ground compresses when a load such as a house is placed on it.</td>
</tr>
<tr>
<td>4</td>
<td>Potential for Shrinking or Swelling Clay Ground Stability Hazards</td>
<td>Clay that absorbs water may be a significant hazard to buildings and structures due to its ability to shrink or swell.</td>
</tr>
<tr>
<td>5</td>
<td>Potential for Running Sand Ground Stability Hazards</td>
<td>Running sand is the flow of sand into an excavation or void caused by water pressure. Problems commonly occur when excavations meet the water table.</td>
</tr>
<tr>
<td>6</td>
<td>Potential for Collapsible Ground Stability Hazards</td>
<td>Usually consists of low density/ open structures that can become unstable when critical load is exceeded</td>
</tr>
</tbody>
</table>

The data has been sourced from British Geological Survey (BGS) [http://www.bgs.ac.uk/](http://www.bgs.ac.uk/). BGS is the world’s longest established national geological survey and the UK’s premier centre for earth science information and expertise.

### Where is it from?

These layers can “fit” on top of each other and therefore all 6 layers can be aggregated together to give a value added data set for any given area within Great Britain.
Land instability in the News

“Land instability caused £200 million worth of damage in the UK and this is set to rise to £390 million, claims Halifax Insurance”

http://www.ukbusiness-news.co.uk

“A woman today told how she cheated death by inches when her patio collapsed falling into a 40-foot cavern. Sue Astill was left peering over the edge of a huge hole created when 8ft of garden slipped into a quarry beneath it. Engineers immediately ordered Mrs Astill off the property for fear that the house could slide down the steep bank.....A large section of her garden is now lying in water at the bottom of Clint Hill Quarry, last mined for granite in the 1920’s”


“Homes have been evacuated after a 30ft (9m) hole appeared in the back gardens of bungalows in Egremont in Cumbria. The area was used extensively for iron ore mining and the collapse is thought to have been caused by land instability”

http://news.bbc.co.uk

Which Landmark Products hold this data?

- **Envirosearch**
  Provides essential environmental information to home buyers and vendors for any property in England, Wales and Scotland.

- **Homecheck**
  The Homecheck Professional Report is the best-selling residential environmental report in England and Wales.

- **Envirocheck**
  A site specific report incorporating comprehensive, high quality environmental information with Ordnance Survey current and historical mapping.

- **Sitecheck**
  Sitecheck provides the most comprehensive and flexible range of commercial environmental reports to lawyers, conveyancers and other property professionals.

All of which use land instability as part of their reports. An example of the dissolution layer can be seen below.