

# Cracking the problem of Subsidence



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## introduction

Changing weather patterns and increasingly dry summers have made subsidence a matter of concern for many UK homeowners.

Fortunately, subsidence is a problem for only a minority of people.

With further dry summers in prospect, however, all homeowners should be aware of it, know what to look out for and what to do should it occur to their property.

This booklet provides helpful advice and information on all of this.



**DIRECT LINE**

Produced by Direct Line  
with assistance from the  
Building Research Establishment



# Putting Subsidence

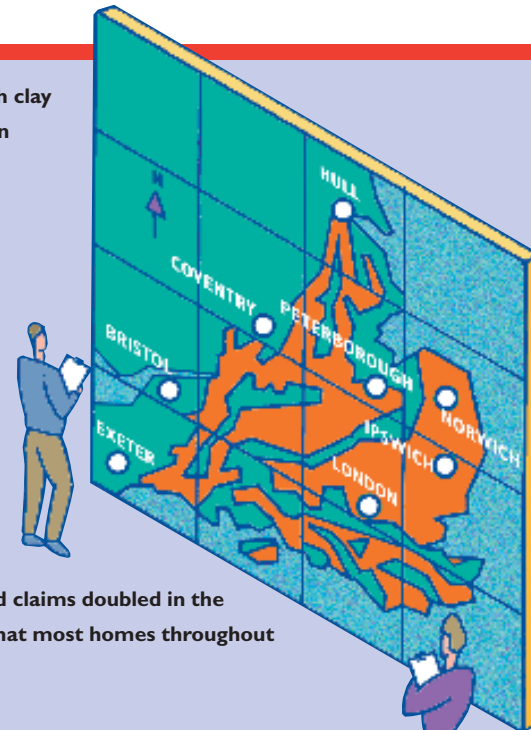
## into perspective

To put the problem into perspective,  
take a look at the facts:

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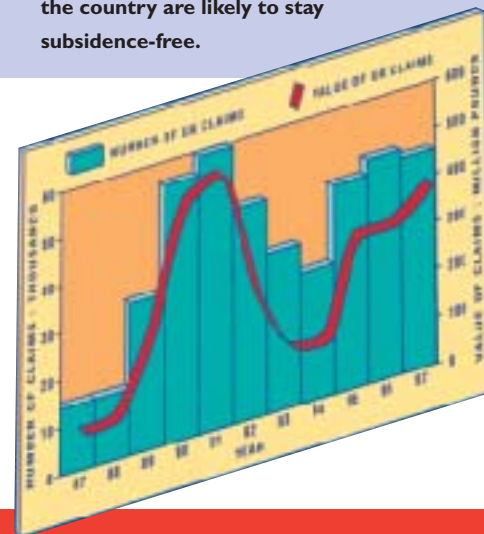
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- subsidence predominantly occurs in areas with clay soil – notably those found south of a line drawn between Bristol in the south west and Hull on the east coast
- the main areas affected are London and the south east where around one in 50 houses has suffered subsidence problems over a period of 30 years since insurance companies first began keeping records
- the unusually dry summers of recent years have led to a rise in the number of homes affected
- there was a sevenfold increase in claims in London and the south east in 1989-1990 and claims doubled in the 1995-1997 period, however the fact remains that most homes throughout the country are likely to stay subsidence-free.



Nevertheless, for those with properties susceptible to subsidence, the damage and disruption that it causes remains a worrying prospect.

Most buildings insurance policies will cover the damage resulting from subsidence. Homeowners can considerably reduce the chances of their property being at risk by knowing what to look out for and taking some simple preventative measures.



# Subsidence

## ...what exactly is it?

Put simply, subsidence involves the downward shift of a building's foundations in line with ground movement which occurs as a result of changes in the moisture content of soil – the clay soil shrinks.

By contrast, 'heave' – upward ground movement and a corresponding movement in foundations – occurs when dry soil swells due to increased moisture or usually as a result of mature trees being removed.



## ...how is it caused?

Several factors contribute to the problem of subsidence:

**A SOIL TYPE** – clay soil is particularly susceptible since it shrinks and swells according to its moisture content and this can be troublesome in periods of exceptionally dry weather. (Around 75% of subsidence claims are for properties built on clay soil.)

### soil type, vegetation and leaking drains are contributory factors

**B VEGETATION** – trees and shrubs can extract moisture from deep within the soil causing shrinkage, especially during long periods of dry weather, as roots extend in search of water, however removal of mature trees can cause previously dry soil to swell up and 'heave' could be the result.

**C LEAKING DRAINS** – damaged drains can also contribute towards subsidence claims. Around one in five subsidence claims are a direct result of drains leaking into sandy types of soil causing soil erosion beneath a building's foundations.

# Subsidence

## ...what to look out for and when to act

To the first obvious signs are cracks but since most houses suffer cracking at some time or other, don't be alarmed by every crack which appears in your home.

In most cases, the damage is likely to be only cosmetic and will simply require filling with suitable grout or sealant during routine maintenance. Many cracks are likely to be the result of settlement as a building moves under its own weight following construction and usually these are nothing to worry about.

Buildings do shrink and swell naturally due to changes in temperature and humidity and this can lead to minor cracks in plaster work and hairline cracks where walls and ceilings meet. These too should not give cause for concern.

The time to start thinking about taking action is when a series of small, usually diagonal cracks suddenly appear in plaster work at weak points around doors and windows or between different parts of the property, especially after long periods of dry weather. Normally wider than the thickness of a 10p coin (around 1mm wide), the cracks are usually wider at the top than at the bottom.



At the first sign of any damage, or if you're at all worried, contact your buildings insurer straight away. If you're in the process of buying a home and suspect there may be a risk of subsidence, make sure you commission a RICS/ISVA Home Buyer's Report which should help identify whether there is a problem.

Once the cause of the problem has been expertly identified, the remedial action prescribed tends to be fairly straightforward. Typical solutions include the professional removal or pruning of trees, renewing or relining of drains or strengthening of the building.

Although it is probably the most widely heard of remedy, in practice today very few cases of subsidence ever require the extreme measure of underpinning – replacing or deepening of existing foundations.

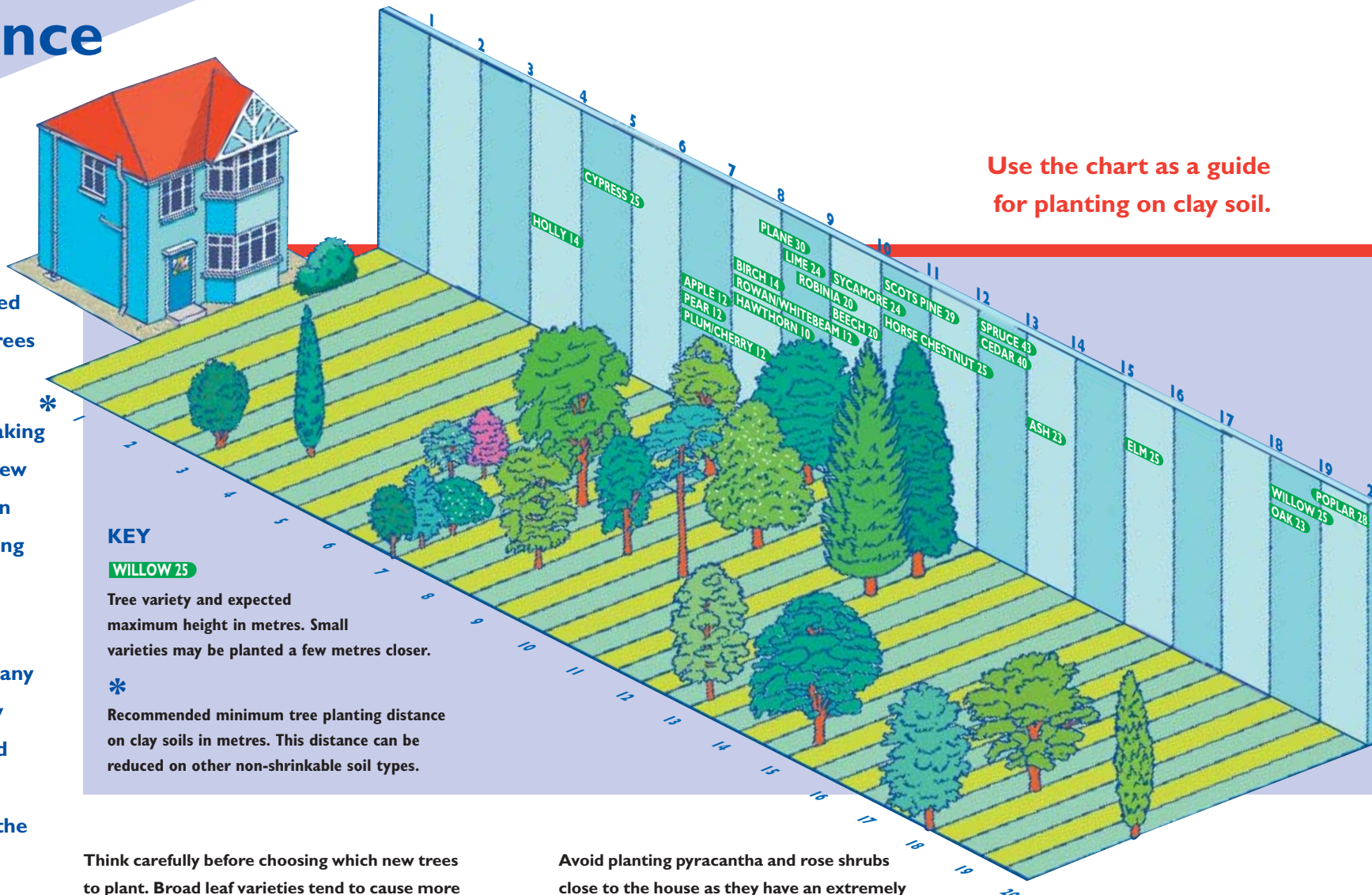
# Subsidence

**...prevention is better than cure!**

As already described, soil moisture content is greatly affected by the size, type and number of trees and shrubs in a garden.

By controlling their growth and taking care over choosing and planting new trees and shrubs, homeowners can help to reduce the risk of soil drying out too much and subsidence problems developing later.

As a general rule of thumb, plant any new trees the same distance away from your house as their expected mature height. Be aware of neighbouring properties too and the impact that any new trees might have on them.



Use the chart as a guide for planting on clay soil.

Think carefully before choosing which new trees to plant. Broad leaf varieties tend to cause more damage than evergreens because of the amount of moisture they require.

Notoriously thirsty varieties include oak, elm, willow, poplar and ash. Planted too close to the house, they may drain moisture from the soil and could end up putting the foundations at risk in the future.

Avoid planting pyracantha and rose shrubs close to the house as they have an extremely aggressive habit. Wisteria can also cause problems because of its size and the amount of moisture it draws from the soil. Consider planting shrubs in containers instead.

While it's a good idea to prune existing trees to prevent them from reaching a height that is greater than their distance from the house,

it may cause problems if you simply hack away. If pruned incorrectly, trees and shrubs may die, leading to swelling of the soil and 'heave' (see page 4)

## ...prevention is better ...continued

Some trees are protected by tree preservation orders, or the property is located in a conservation area in which trees are protected. If this applies to a tree in your garden, you'll need to obtain special permission from your local council before removing or pruning it. Take professional advice from a tree specialist or arboriculturalist if in any doubt.

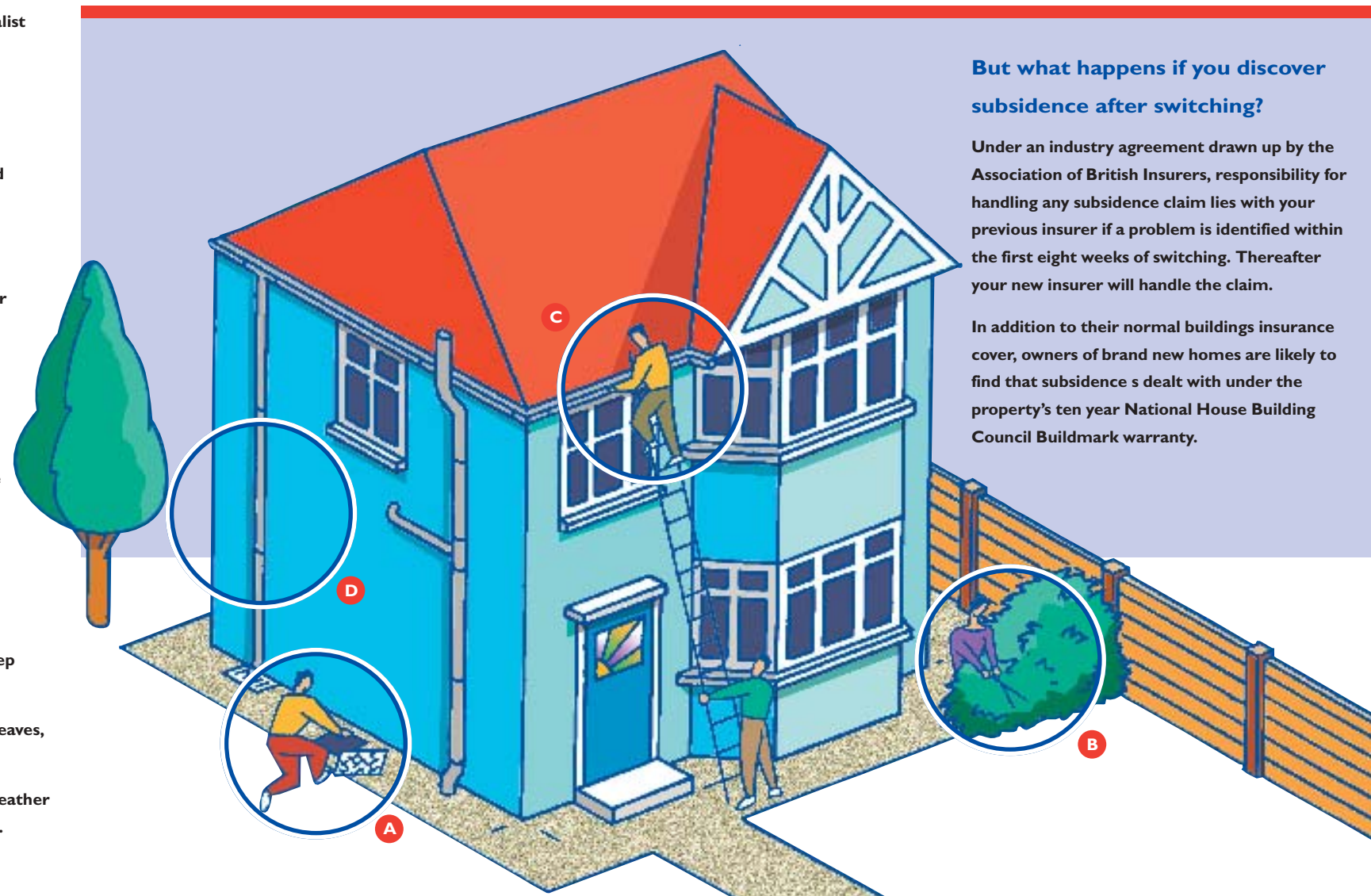
Contact the Arboricultural Association ('Useful Contacts' page 14) for a directory of consultants and contractors. Using a professional to prune your greenery should also ensure it keeps its aesthetic shape and health.

Don't be tempted to remove any tree that you haven't planted yourself or that is older than any part of the house without taking professional advice. 'Heave' may well be the result.

It also makes sense to get into the habit of carrying out regular general maintenance on your property. Introducing a few simple housekeeping tasks will generally help keep your home in good condition.

### For example:

- A** check for blocked or leaking drains;
- B** prune trees and shrubs regularly to keep them to a sensible height;
- C** check gutters regularly and clean out leaves, dirt and general rubbish; and
- D** check pipes, particularly during cold weather to ensure there are no damaging splits.



**Regular maintenance will help keep your home in good condition**

## Changing insurer

With home insurance so competitively priced and easy to arrange these days, people increasingly are switching insurers to take advantage of lower premiums and policies that are tailored to suit their needs.

### But what happens if you discover subsidence after switching?

Under an industry agreement drawn up by the Association of British Insurers, responsibility for handling any subsidence claim lies with your previous insurer if a problem is identified within the first eight weeks of switching. Thereafter your new insurer will handle the claim.

In addition to their normal buildings insurance cover, owners of brand new homes are likely to find that subsidence is dealt with under the property's ten year National House Building Council Buildmark warranty.

# Direct Line's approach...

## ...putting the customer first

In keeping with Direct Line's entire business philosophy, the company's approach towards dealing with subsidence claims is straight forward and clear.

We aim to:

- put customers' needs and peace of mind first;
- provide fast, helpful, expert advice;
- deliver effective, professional remedial action; and
- keep the customer informed of progress throughout.

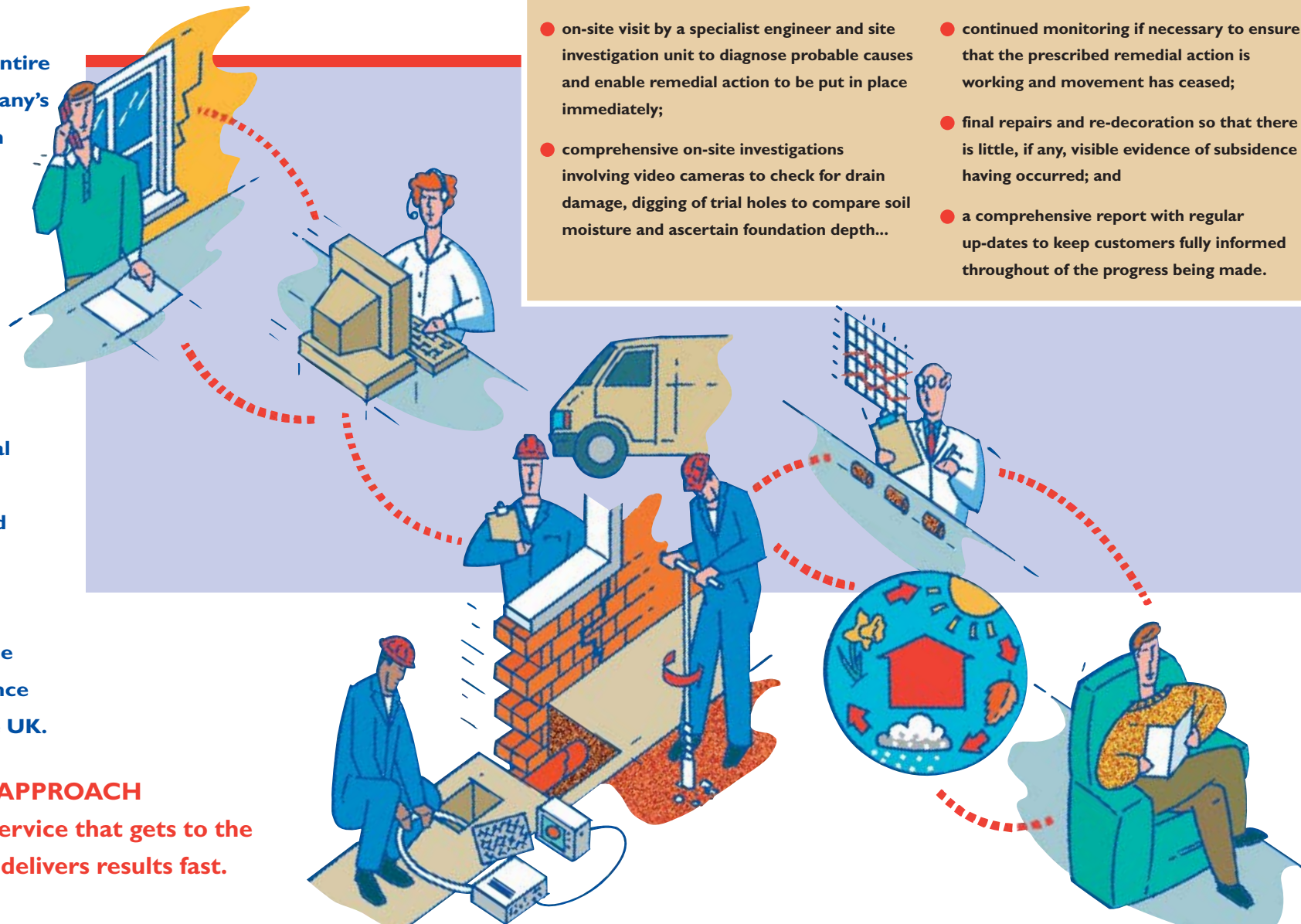
To achieve these objectives, Direct Line have developed one of the most advanced subsidence claims handling services in the UK.

### DIRECT LINE'S APPROACH

– an all-round subsidence service that gets to the root of the problem and delivers results fast.

#### Key features of Direct Line's streamlined subsidence service include:

- centralised claims handling by a team of professionally qualified engineers and surveyors;
  - immediate response in urgent cases where collapse may occur;
  - on-site visit by a specialist engineer and site investigation unit to diagnose probable causes and enable remedial action to be put in place immediately;
  - comprehensive on-site investigations involving video cameras to check for drain damage, digging of trial holes to compare soil moisture and ascertain foundation depth...
- ...plus soil sampling to help confirm the source of a problem and establish how long it is likely to take to resolve;
- a free assessment from an independent industry expert;
  - continued monitoring if necessary to ensure that the prescribed remedial action is working and movement has ceased;
  - final repairs and re-decoration so that there is little, if any, visible evidence of subsidence having occurred; and
  - a comprehensive report with regular up-dates to keep customers fully informed throughout of the progress being made.



## Useful Contacts

|                                              |               |
|----------------------------------------------|---------------|
| Direct Line Subsidence Unit                  | 0845 878 5422 |
| The Building Research Establishment          | 01923 664 000 |
| The Institution of Structural Engineers      | 0207 235 4535 |
| The Arboricultural Association               | 01794 368 717 |
| The Association of British Insurers          | 0207 600 3333 |
| Financial Ombudsman Service                  | 0845 080 1800 |
| The Royal Institution of Chartered Surveyors | 0207 222 7000 |

## ...suggested further reading

|                                                                                                                     |                     |
|---------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>HAS YOUR HOUSE GOT CRACKS?</b> (second edition)<br>T J Freeman, G S Littlejohn and RMC Driscoll – Thomas Telford | ISBN 0-7277-3089-4  |
| <b>TREE ROOTS &amp; BUILDINGS</b><br>D F Cutler & I B K Richardson – Longman Scientific & Technical                 | ISBN 0-582 03410-8  |
| <b>SUBSIDENCE OF LOW RISE BUILDINGS</b> (2nd edition)<br>The Institution of Structural Engineers                    | ISBN 1-8742 66-54-9 |
| <b>AMENITY TREES AND INSURANCE ISSUES</b><br>International Society of Arboriculture – SORP2000                      | ISBN 09537025-0-2   |

The information contained within this booklet is for guidance only.  
If in doubt consult one of the professional organisations listed above.

For a competitive home insurance quote or for an insurance quote on other products call Direct Line on the following customer hotlines:

|                  |                                                            |
|------------------|------------------------------------------------------------|
| HOME             | 0845 246 0355                                              |
| MOTOR            | 0845 246 8770                                              |
| RESCUE           | 0845 246 8814                                              |
| PET              | 0845 246 8955                                              |
| TRAVEL           | 0845 246 8958                                              |
| HOME RESPONSE 24 | 0845 246 0999                                              |
| LIFE             | 0845 605 0380                                              |
| MORTGAGES        | 0845 246 8028                                              |
| PERSONAL LOANS   | 0845 246 8022                                              |
| ONLINE QUOTES    | <a href="http://www.directline.com">www.directline.com</a> |



email: [feedback@directline.co.uk](mailto:feedback@directline.co.uk) website: [www.directline.co.uk](http://www.directline.co.uk)

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A member of the Association of British Insurers and of the Insurance Ombudsman Bureau.

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**Customer Priority Line**

For further information or advice please call:

**0845 246 8585**

or go online at

**www.directline.com**



Direct line Insurance plc, 3 Edridge Road, Croydon, CR9 1AG

A member of the Association of British insurers and of the insurance Financial Ombudsman Bureau and a member of the General Insurance Standards Council. Subject to our normal underwriting criteria available on request.

Lines are open 8am to 9pm Monday to Friday and 9am to 5pm Saturday & Sunday.

Call may be monitored or recorded with the aim of improving our service.

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