



Subsidence and the Chartered Loss Adjuster

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This paper provides an introduction to the perils of Subsidence and Heave and highlights some of the insurance issues that require consideration by a Chartered Loss Adjuster.

What are Subsidence and Heave? And what causes them?

Subsidence and Heave are indications that the foundations of a building have moved. Subsidence is the downward movement of foundations and Heave is the upward movement of foundations.

There are a number of ground related reasons as to why this may occur including:

- Vibration
- Chemical attack on the foundations
- Frost heave
- Nearby construction or excavation
- Collapse of mine working or natural cavities/fissures
- Compression of made ground
- Variations in the groundwater level
- Soil softening or erosion
- Shrinkage or swelling of clay soil
- Compression of a soft soil layer due to imposed loads of foundations

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The majority of these factors will begin to affect properties from the time of construction and therefore normally manifest damage within 10 or 20 years of the buildings life.

For older properties that have not had longstanding problems, subsidence or heave is caused by a change in circumstances. In such areas as Staffordshire, Yorkshire and Durham, damage has been caused to properties by the collapse of underground mines or cavities.

For the remainder of the UK, there are two primary causes of Subsidence to all properties, dependent on the ground conditions:

1. Erosion or softening of the ground below the foundations by water passing through, such as leaking drains.
2. Shrinkage or swelling of the near surface clay sub-soil.

Erosion

Water passing through a soil has the ability to carry the finer particles, loosening the soil and allowing compaction. Sandy or granular soils are more susceptible to this compression than a clay soil, however modern drains are laid with a granular bed, surround and cover, which can be influenced by leaking drains causing the sides of the excavation to weaken or collapse.

In some older properties, the drainage travels under the house, which if leaking, can cause localized subsidence in those areas. External drain leakage is less likely to be problematic, however significantly damaged drainage or indeed being blocked, can cause substantial water leakage which will have an influence on the ground conditions.

Shrinkage or swelling in clay soils

The most common cause of foundation movement in the UK is due to the shrinkage or swelling of clay soils due to changes in its moisture content.

Subsidence is shrinkage in the clay soil on which a building stands, influenced by changes in the climate and the impact of vegetation. Dry summer months will dry the upper layers of soil which in turn causes trees to transpire through its leaves moisture that it sucks from the soil through its fine roots, which may lie under the foundations of a property, resulting in the shrinkage of the clay and subsequent movement in the building.





With the removal of the trees influence and wetter winter weather, rainfall will rehydrate the clay soils, returning them to their original characteristic, lifting the building back to its original position and allowing cracks to close, to the extent that simple cosmetic repairs can be undertaken.

Heave normally occurs on new development sites where former vegetation or trees has been removing moisture from the ground for many years and therefore causing the site to be desiccated. If this vegetation is removed, the clay soils will gradually recover the lost moisture, expanding as this occurs.

Any new property built on such a site will be disproportionately pushed upward; this mechanism is known as heave, which can be catered for in the design of the foundations, but if not, can lead to substantial damage, which is difficult to resolve.

The role of a Chartered Loss Adjuster

The structural nature of subsidence claims require engineering and/or surveying input however the expertise of a loss adjuster is just as important. Subsidence claims fall for consideration under an insurance policy and so a full understanding of insurance principles, policies and practices is required to correctly interpret insurance cover and to handle the different aspects of a subsidence claim. This is best served by the insurance claims expert, the Chartered Loss Adjuster.

What are the insurance considerations?

Whilst an insurance policy will typically provide cover for subsidence/heave or landslip damage, there will be limitations to the cover and other issues that require consideration and action:

Policy exclusions

A typical insurance policy will have exclusions in relation to subsidence. For example:

Subsidence

Subsidence or ground heave of any part of the site on which the property stands or landslip excluding:

- a) *i. DAMAGE to land insured hereby unless also affecting a Building insured hereby*
- ii. CONSEQUENTIAL LOSS in respect of land insured hereby unless a building at the same Premises used by the Insured for the purpose of the Business is also damaged thereby*
- b) *DAMAGE or CONSEQUENTIAL LOSS caused by or consisting of:*
 - i. The normal settlement or bedding down of new structures*
 - ii. The settlement or movement of made up ground*
 - iii. coastal or river erosion*





- iv. *defective design or workmanship or the use of defective materials*
- v. *fire, subterranean fire, explosion, earthquake or the escape of water from any tanks, apparatus or pipe*
- c) i. **DAMAGE**
- ii. *loss resulting from destruction or damage which originated prior to the inception of this cover*
- d) **DAMAGE or CONSEQUENTIAL LOSS** resulting from:
 - i. *Demolition, construction, structural alteration or repair of any property*
 - ii. *Groundworks or excavation at the same premises*
- e) *In respect of Section A in respect of each and every loss the greater of the amounts stated in the Schedule or Folio to be the Excess*

ABI Domestic Subsidence Agreement

Dependent upon the timing of when the damage was first reported, some Insurers have agreement as to how claim costs should be apportioned when there has been a change in Insurer. This could result in part of the claim costs being shared or in some cases, the entire claim being passed to a previous or new Insurer.

Contents insurance

Whilst subsidence cover falls for consideration under a buildings policy, there is the possibility that the contents Insurer may be liable for some costs if alternative accommodation is required (depending on the policy wording). Alternative accommodation cover will also only operate when there is a valid claim.

Drainage repairs

In instances of damage due to defective drainage, it may well be that the pipes in question are shared with neighbours and therefore a shared contribution to the cost of repairs should be sought from their respective Insurers.

Alternatively, dependent on the pipe layout and the age of the property, the local Water Authority may be responsible for repairs to the drainage.





Mitigation and recovery

This primarily arises in the instance of third party trees and clay soils being influenced by the moisture demand of the trees. Investigations will confirm the cause of damage by the trees/vegetation and their ongoing influence.

Representations need to be made to the tree owners who will have liability cover under their contents policy in a domestic situation, who in turn may appoint Chartered Loss Adjusters to defend a claim.

Other commercial tree owners may have a liability and claim costs could be recovered, this also being particularly applicable to Local Authorities.

This is an area of great legal debate, which requires the working knowledge of a Chartered Loss Adjuster, not only to assist in satisfactorily resolving a claim for the respective Principal, but also obtaining successful recovery of claim costs where possible.

Summary

This is a brief overview of the Subsidence and Heave topic, designed to give readers a flavour of the causes of these problems plus the complexities involved when considering extent of indemnity under an insurance policy. A working understanding of the technical issues is required, but to a greater extent a sound knowledge of the insurance provisions, best served by a Chartered Loss Adjuster.

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