UNDERSTANDING SUBSIDENCE RISKS



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Understanding subsidence risks when purchasing a property

Subsidence due to prolonged periods of hot & dry weather is an increasing problem. We look at the key issues and the planning considerations.

1. What is subsidence?

Subsidence is a form of ground movement which can cause damage to property, generally as a result of drought. The ground loses moisture and shrinks, often following a lengthy dry spell. Trees and large shrubs may also cause subsidence as they are able to absorb large amounts of water from the soil. An opposite form of ground movement is 'heave' whereby the ground swells as a result of high water levels and causes movement and damage in buildings.

Climate change including the increasing regularity of hot and dry weather is a key factor behind the heightened risk of subsidence. A lengthy drought in 1976 brought the matter of subsidence to the fore and over the past two decades more extreme weather patterns have become common place. In France, following the severe 2022 drought, attention has focused on its potential long-term impact; a report published in July 2022 projected that the cost of climate-related insurance claims may double over the period 2020-2050[1].

Typical issues

2. Why is understanding the risk of subsidence important? Insight into the frequency of subsidence and where it is most likely to occur is relevant to land and property owners, insurance companies and to the French government.



If you are looking to buy or develop property, knowledge of the estimated risk of subsidence occurring is useful for undertaking construction, maintenance and prevention work. In France, the French government has responsibility for regulating the levels of compensation to insured home owners in the event of a major climatic incident: called a catastrophe naturelle. With subsidence progressively more significant in its occurrence, insurers are now seeking detailed information on the frequency and intensity of subsidence to assess risk and its financial implications. In fact, between 1982 and 2020 37 % of the total costs of natural catastrophes in France were due to subsidence[2]..

3. What is a typical problem caused by subsidence?

Cracks in an internal or external wall can be an indication of a subsidence problem.

Many older properties in France have relatively limited foundations; this compares with more recently built houses and apartments which use advanced methods of construction.

A crack in a wall is not necessarily an indication that there is a structural issue requiring attention. Some fissures which appear after a long dry period may be largely superficial. However, if structural damage is a cause, underpinning the building is one option. In terms of types of property, bungalows make up 90% of insurance claims due to drought-related subsidence[3].

What to do in the event of subsidence

4. What to do in the event of subsidence

In France, private property insurance policies will generally cover subsidence issues[4]. If a claim is to be pursued as a result of a natural disaster (such as a drought), the French government will need to make an official declaration of a catastrophe naturelle for the commune where the property is located. The local Mairie plays a critical role by making an application to the state prefecture who will determine whether a catastrophe naturelle has occurred. Insurers will also wish to investigate and determine whether any cracks are due to drought – and if the property requires remedial works[5].



Planning considerations

5. Planning considerations regarding subsidence

Planning officers increasingly ask for evidence of a soil survey when projects are situated in high-risk subsidence areas. The soil survey typically involves conducting a G1 or G2 structural soil survey, which identifies the soil's strata and composition, enabling the installation of appropriate foundations.



Planners frequently demand an attestation from the project's architect or, if there's no architect, from the applicant. This attestation confirms that the architect or applicant incorporated the soil study findings into the building's design. This becomes important later on if there is movement and an insurance claim is made, as the insurers will want to gather all the details of the house and if it is found that inadequate foundations have been constructed, they may have cause to not pay for the remedial works.

Understanding the potential risk of subsidence is an important first step information on subsidence risk and other natural risk phenomenon can be found at <u>https://www.georisques.gouv.fr/</u>

Would you like to know more?

If you are looking to realise your own project in France, whether it is a renovation, a new build, an extension or another project, residential or commercial – please get in touch.

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References

[1] https://us.milliman.com/en/insight/secheresse-2022-analyse-durisque-subsidence-en-france

[2] https://nhess.copernicus.org/articles/22/2401/2022/

[3]

https://www.connexionfrance.com/article/Practical/Property/Bungalo ws-in-France-at-most-risk-of-drought-related-subsidence [4] Ibid.

[5] https://www.french-

property.com/news/money_france/catastrophe_naturelle_insurance_ claims