



CLIVE THOROGOOD
BUILDING SURVEYING LIMITED

Technical Note 5: LOFT SPACES

Background

If you have ever wondered how a Building Surveyor can spend so long looking in your loft space, there are multiple things to look for amongst the Christmas decorations and suitcases. This is a list of just 10:

1: Rodents

Your loft provides the perfect breeding ground for mice and rats and finding rodents is less of a rarity than you may wish to think about. Gnawing marks on roof timbers, chewed-up pipe lagging and widespread pellets are a typical sign of Black Rat infestation. The risk of electrical cabling damage and disease means that eradication is essential and a pest controller is best served to advise. A serious infestation could mean emptying the loft space of everything, including the loft insulation, so this can be a major disruption and high-cost problem.

2: Asbestos

Older properties, certainly up to the 1970's or so, could have asbestos cold water storage tanks and/or ventilation ductwork. Suspected materials should be assumed to be formed with asbestos, until they are tested and are proved otherwise.

Even if the tank is in good condition, there is a risk of asbestos fibres entering the cold-water supply, which feeds taps in bathrooms and these could be ingested e.g. brushing teeth. Always have such tanks tested and replaced as necessary.

3: Party Wall gaps

The dividing wall between adjoining properties (most likely a party wall), needs to be able to provide adequate fire compartmentation, should a fire break out in one side and be able to spread across into the neighbouring building. All too often, large gaps are identified and these must be suitably sealed. Ideally, this should be on both sides, but certainly on your side. This may have implications for your building insurance if you are aware of this and a fire occurs.

4: Lath and Plaster Ceilings

The loft inspection provides a good opportunity to inspect the ceiling of the rooms below. If these are of lath and plaster construction, then a close examination of its condition should be conducted. See Technical Note 4 for further explanation.

5: Unsupported chimneys

It is possible that internal chimney breasts have been partly removed to create more space in the rooms below. Sometimes, little thought is given to how the chimney stack above is to be supported. Whilst an external or internal party wall can provide some support, this may prove problematic in a high wind or snow load.

Often, the internal breast is removed just above ceiling level i.e. it needs to be supported on a lintel bearing off of the party wall at floor level in the loft space. Alternatively, a pair of steel gallows brackets is used. Either way, this needs to be checked.

6: Beetle attack

Roof timbers can be attacked by a selection of beetle larvae. Different species of timber are infected by different species of beetle. See our Technical Note 8 for further information.

7: Condensation

A lack of ventilation in a loft space can lead to a build-up of excess moisture, which may condense on the underside of the roofing membrane, or on the surface of the roof timbers, if either reach their Dew Point temperature. This can collect and drip down, so damaging insulation or electrics, but can also contribute towards the development of fungal infestation.

A common cause of excess moisture in a loft space is non-attached bathroom ventilation ductwork. The bathroom mechanical extract fan might be running, but not connected to anything and, therefore, dumping moist air straight into the loft. This will create significant condensation issues.

8: Bats

In Britain all bat species and their roosts are legally protected, by both domestic and international legislation. This means you may be committing a criminal offence if you deliberately take, injure or kill a wild bat, intentionally disturb the roost or obstruct access to it.

Through the Habitat Regulations 2010, Planning Authorities have a legal obligation to consider whether bats are likely to be affected by proposed works. If a bat survey has not already been undertaken to determine the potential for bats on site and or the presence of bats, the authority should request that the developer/homeowner commission an

appropriate survey. The so-called 'Emergence Survey' assesses bat movement at dawn/dusk and identifies species/numbers/use of the site. From this, an assessment is made as to the likely disturbance from the proposed development and how this can be mitigated.

If a bat survey demonstrates that development is likely to affect bat foraging and/or commuting habitat, or a known roost are likely to be affected by the proposed development and planning permission is to be granted, a condition should be placed on the decision notice requiring the developer to apply for and obtain, a European Protected Species Licence before work commences. The Emergence survey can only be undertaken between May-September, so timing could be the key issue in your proposed development if you miss this window.

Therefore, if you are proposing such works as a loft conversion, dormer extension or re-covering of the roof then the presence of bats could be a significant hinderance and one not to be ignored.

9: Damaged Sarking

The underfelt to the roof tiles/slates (sarking felt) is there to provide the primary waterproof barrier against external rain. The tiles are the physical barrier to protect the felt and provide the aesthetic benefit, but the sarking is essential to maintain in the first instance. If properly lapped into the gutters, any water penetrating the tiles will soak away over the top of the felt.

All too often, the felt is damaged by general internal movement e.g. boxes being moved around and old mineral felt-based sarkings become very brittle over time and, hence, are easily damaged. It is vital that these are repaired to ensure a weathertight layer under the tiles, as any water penetrating passed missing or slipped tiles/slates will otherwise just pour into the loft. Not all roofs have any form of membrane under the slates, of course.

Older properties may have a bitumen-impregnated building paper used as a membrane under the tiles. This serves the same purpose, but is even more sensitive to damage and it is nearly-always found to be torn, or just falling away through age.

More recent buildings, or roofs having been re-covered, will have a modern waterproof and breathable membrane installed. These can still be damaged, but are less prone to this.

10: Structural alterations/failure

Sometimes, the structural integrity of the roof is compromised. This can be due to beetle or fungal infestation weakening the timbers, or where the timbers themselves have been adapted, removed or have issues with their joints. It is not uncommon, for example, to see collars poorly-nailed to rafters (the collar ties the front and rear rafters together to stop the roof 'squatting down' and splaying outwards) and these would need to be re-fixed.

Ridges are weak points. Water penetrating through weathered joints in ridge tiles can find its way in through poor laps in the sarking. Water soaking the ridge can continue down to the top of rafters, which can distort as a result and some bracing may be required.

There could be other alterations undertaken to what was a perfectly functioning roof structure and this needs an approach of standing back and thinking about how the structure is meant to be 'working' against what the surveyor is actually looking at.

Always seek professional Building Surveyor advice for a complete assessment.