

Technical Guide



Repair or Replace a Commercial Roof: A Comprehensive Guide



Partners for the **Life** of Your Building



When is the Best Time to Repair or Replace a Commercial Roof?



Technical Manager:
Dale Thomas

Regular inspections and annual maintenance of a commercial roof should always be essential to asset and facilities management. It helps to preserve the waterproofing membrane, prevent drainage issues and spot any potential problems before they can progress, allowing repairs to be made quickly and cost-effectively. But how do you determine the right time to perform repairs and when it is finally time to replace the roof? This guide will give you the knowledge you need to answer these questions.

Roofing is a substantial investment in your building, so maximising its lifespan ensures you get the best return on investment possible. However, at a certain point, everything, no matter how well looked after, reaches the end of its useable life. Repairs at this point will provide diminishing returns compared to the advantages of a complete roof replacement.

If you have safe access, you can visually inspect your roof to look for any early signs of damage or potential problems before they deteriorate. This allows you to contact your roofing specialist as soon as possible, hopefully well before there is any failure in the waterproofing. From here, they can perform a detailed roofing survey and perform any necessary investigative work to establish the cause of the problem and how best to resolve it.

Understanding the Signs of a Damaged Roof

The first step is to identify the signs that your roof may be damaged. The table below lists all the signs of damage to

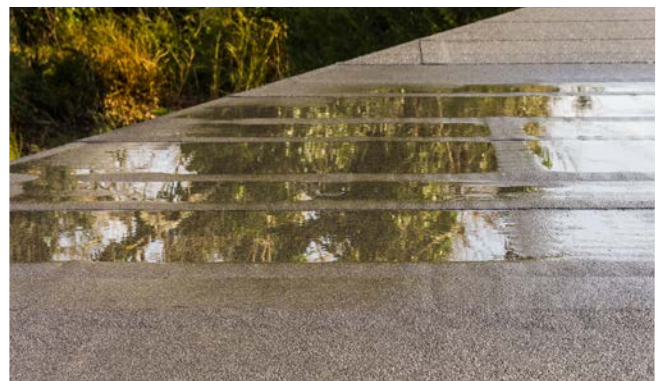
your roof and that it's time to contact your Garland UK Technical Manager to arrange a roof survey.

Ponding Water

Ponding water on the roof is a tell-tale sign of a problem with the roofing substructure, where sagging, an insufficient slope, or drainage issues could be the root of the issue. Sitting water puts increased stress on that section of the roof, which will eventually cause the system to fail.

Gaps in Seams

Roofs are constantly subjected to slight movement, ranging from expansion and contraction in hot and cold weather to movement in the building structure. Over time, this movement can lead to gaps forming in the seams, allowing water to ingress. Equally, poor workmanship on installation can result in weakened gaps in the membrane seams, where watertight adhesion to the substrate has yet to be achieved from the outset.



Deteriorated Flashing

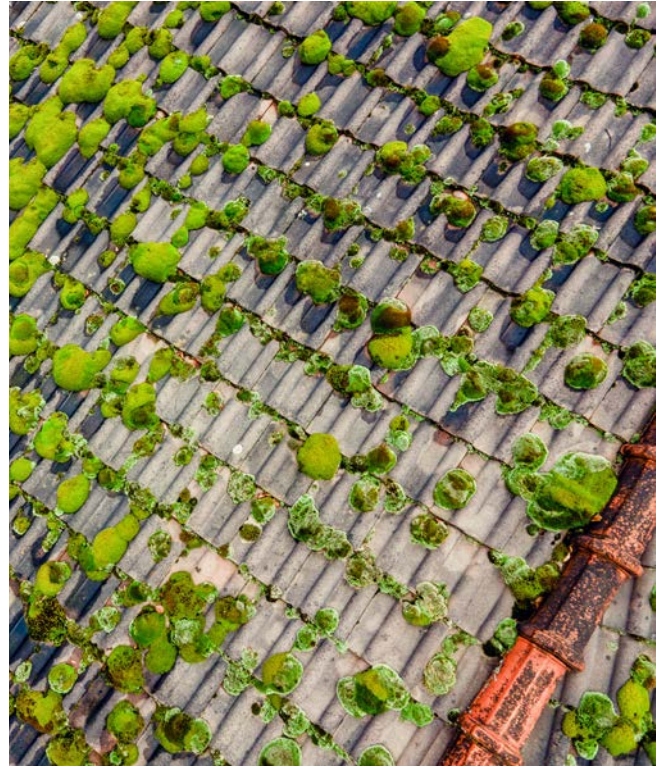
Flashing is an often neglected part of the roofing structure. While good detailing and installation of flashings in your roof will significantly extend its usable lifespan, over time, it can deteriorate from UV exposure, physical damage, and movement in the building structure. As a result, it can fail or become loose, which in turn will cause leaks to occur.

Ageing

All materials have a lifespan during which they will remain effective. UV exposure, movement and physical damage will all eventually take their toll on the roofing structure. Spotting signs that the surface roof structure is nearing the end of its life cycle before it fails will provide you with significantly more options for repair before a complete roof replacement is necessary. The three previous points are indicators of an ageing roof structure. In addition, a key indicator of ageing in your bitumen membrane is alligatoring, a crazed cracking pattern in the surface, which, as the name suggests, looks similar to the skin of an alligator. If left unattended, this will only deteriorate further, eventually causing the roof to fail.

Blistering

Blistering is caused when pockets of air or moisture become trapped between layers of the roofing membrane or the roof deck. As the sun warms the roof's surface, these pockets expand, stretching the roofing membrane and causing blistering. Blistering in and of itself is not necessarily a problem, as the roof can accommodate some movements. Still, they need monitoring to ensure that the surface is not detaching from the blistered area, that they have not caused



any cracking in the surface membrane and that the blister is not near a seam, which may cause the seam to open for water to ingress.

Organic Growth

Whilst algae, lichens, mould, moss, fungi, and other vegetation may not seem like anything to be too concerned about, they are excellent early indicators that the roof requires some immediate attention. Organic growth is symptomatic of prolonged water retention, which can indicate a problem with the roof structure. Not only that, but left untreated, the actual vegetation's growth can cause more damage to the roofing surface.

Debris in Gutters

As part of the regular inspection and maintenance of the roof, it is essential to clear built-up debris from the roof surface and gutters. This allows water to run freely into the drainage system as intended, stopping prolonged water retention on the roof structure. If this has been neglected, it can allow for prolonged water retention that should be avoided, putting increased stress on the roofing structure, which can cause the roofing system to fail over time.

Internal Damage

Peeling wallpaper, brown ceiling spots, cracked paint, mould on walls and ceilings or internal leaking. Unfortunately, by the time any of these internal signs of water ingress have occurred, one of the external indicators listed above has progressed to a failure of the roof structure itself.

Whilst this is not ideal, early action is the key to resolving these problems before they can deteriorate further, keeping repair time and costs minimal.



Roof Surveys: The Key to Assessing Roof Condition

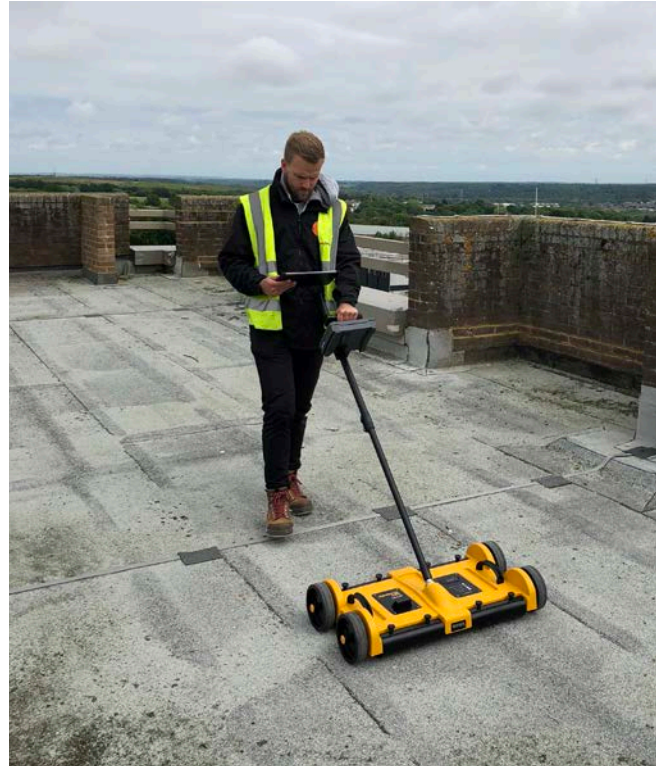
This is where one of our expert Technical Managers takes the lead and conducts a full roof survey. This is essential to allow an accurate assessment of the roof condition and to determine whether any failures have already happened that need remedial work or if there are pre-emptive steps that can ensure a potential failure doesn't progress.

This begins with a detailed visual inspection, looking for any indications of a problem that needs resolving. This may involve a drone survey if the roof is difficult to access. Suppose there is indeed a suspicion that a failure may have occurred. In that case, we have a variety of methods to investigate and diagnose if this has progressed to an actual failure of the waterproofing membrane and, if so, the extent of the damage.

Investigating Works: Digging Deeper into Roof Condition

Once the problem areas are identified, core sampling is conducted to establish the existing build-up of the roofing structure and provide information on the condition of the roof deck and any underlying issues.

This investigative work provides vital data that can be used to determine the cause and extent of any damage. This dictates



the best course of action, ensuring that no superfluous refurbishment works are conducted, minimising costs and eliminating unnecessary waste. Please see our case study on [Thorpe Primary School](#), which perfectly illustrates how beneficial and effective this approach is in the real world.



When To Repair or Replace: Factors to Consider

So, with the roof survey and related investigative works completed, we have all the data we need to assess the extent of the damage to the existing roof. Where the damage is not extensive or is localised in a specific area, a repair will always be the best course of action. A full roof replacement is warranted at the other end of the scale, where the damage is extensive, especially if it has begun to compromise the roofing deck.

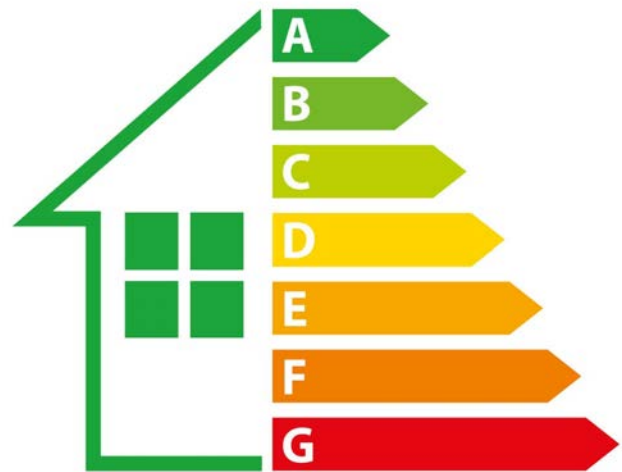
But what if the damage is somewhere in between? This is where additional factors come into play, namely the age of the roof and the comparative cost-effectiveness of a full replacement compared to the cost of extensive repairs. The closer the existing roof is to its expected end of life, the more likely a full replacement will be the best solution, as more failures are likely to occur in the near future, which changes the comparative cost-effectiveness of each solution. Replacing an old roof can also provide additional benefits, such as increased thermal insulation, which will help to reduce the operational costs of your building.

One final factor that may dictate the chosen solution is budgetary constraints. Whilst not necessarily the most cost effective solution, a short-term solution may be needed to resolve the immediate problem and allow time to gather the required capital for a full roof replacement.

Environmental Considerations: Minimising Waste to Landfill

Unnecessary refurbishment and roof replacement works cost more than just money; they also harm the environment, specifically the [Embodied Carbon emissions of your building](#). The longer the life cycle of your chosen roofing solution, the more significant the improvement in its embodied carbon emissions.

Two of the [Circular Economy principles](#), reduce and repair, dictate the most sustainable approach that should be taken. By repairing only what is actually necessary, we reduce the amount of waste that is generated that is destined for landfills. This helps the environment and helps to achieve your business's carbon commitments.



EPC Ratings: Forward Planning

In September 2023, the government removed the requirement for landlord's buildings to be rated EPC C by 2025. However, it is still a requirement for commercial buildings to meet an EPC E rating, which incurs a significant fine of up to £150,000 if breached.

Looking ahead, there is still a positive outlook for landlords, where decisions to repair or replace a roof in the short term will not only significantly impact a building's efficiency but also ensure preparations have been made for increased EPC

compliance in the near future.

Whilst government legislation at this stage is not set in stone, there are indications that a commercial building's EPC rating will increase to band C in April 2027 and band B by 2030.

Mortgage lenders are also forward planning for future EPC compliance, where many have voluntarily signed up to the [Net-Zero Banking Alliance \(NZBA\)](#). This provides lenders with an environmental, social, and governance (ESG) framework, incorporating [Green House Gas Protocol \(GHGP\)](#) accounting standards and commits them to targets that align with the Paris Agreement's goals.

What this means in practice is that it will become increasingly difficult and more expensive to mortgage properties that are not at least EPC-C rated. The flip side of this is that mortgage lenders are already creating 'Green Mortgage' products that are cheaper for more environmentally friendly properties. There is also a proven '[Green Premium](#)' that increases both the underlying asset value and the rental value of the greener buildings.



Partners For The Life Of Your Building

Roof surveys are an invaluable tool to help you determine whether it's time to repair or replace your commercial roof. Even so, it can still be a difficult decision, so it's always best to consult your Garland UK Technical Manager to help formulate the right solution for your roofing needs.

Garland UK believes in partnering with you for the life of your building. As part of our PartnerCare service, the Garland UK aftercare programme will provide you with regular roof inspection reminders, giving you all the support and guidance you need. These range from annual 'health check' site visits by your dedicated Technical Manager to providing general maintenance schedules and tailored cleaning plans for your roof.



Garland UK has a national network of approved contractors with extensive expertise and training who can provide yearly maintenance contracts. Combined with our PartnerCare service and up to 30-year Single-Point Guarantees, we can help to take the stress out of maintenance throughout the life of your roof.



A full roof survey provides an accurate assessment of the current condition of your roofing asset. With this information and expert advice, determining whether it is the right time to repair or to replace a roof has never been easier.


Dale Thomas,
Technical Manager, Garland UK



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protected by the
industry experts**

Find your local roofing expert

 info@garlanduk.com

 01174 401 050

 www.garlanduk.com