

Are you absolutely sure your building envelope warranty is valid?

Quality control over the total building envelope system design, perimeter detail construction, high-quality workmanship and maintenance exert the most impact on the life expectancy of any building – and therefore the value of any investment in that property.

Article by Richard Polling, Group Director - MRC Group. Photographs courtesy of MRC Group.



THE PROBLEM WITH MATERIAL GUARANTEES AND WORKMANSHIP WARRANTIES

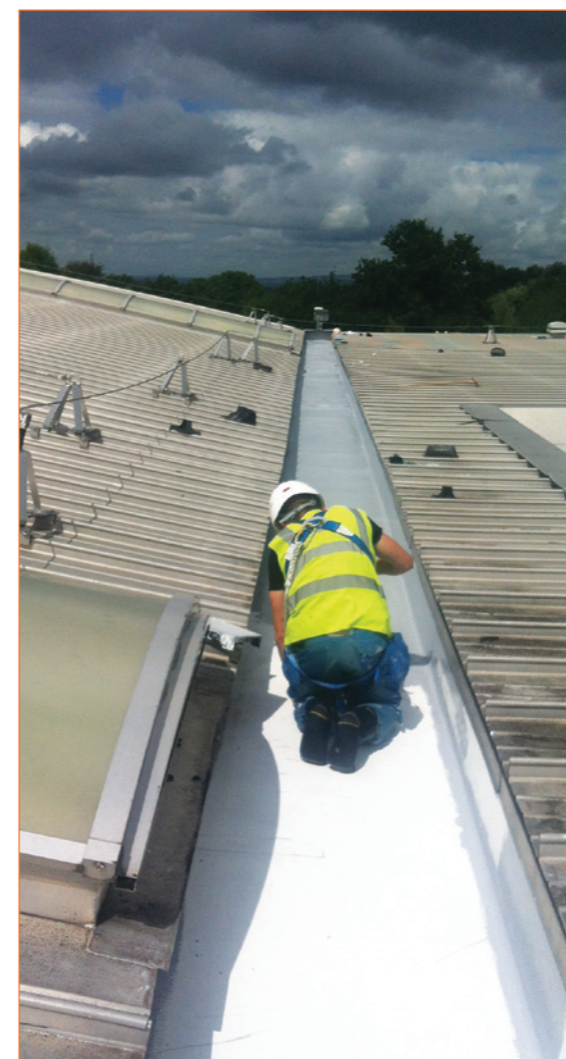
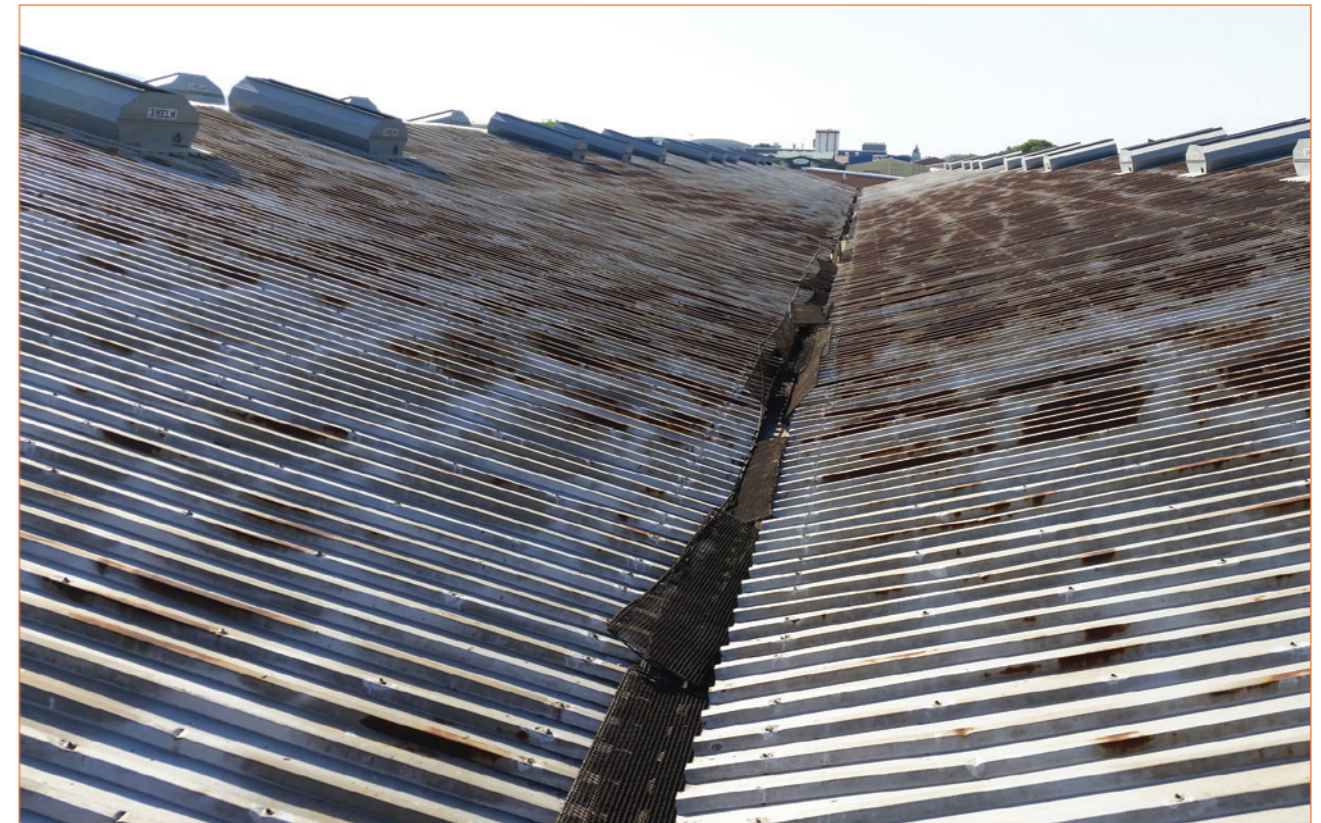
Guarantees and warranties are a key part of any building envelope system. The individual manufacturers of the building envelope each provide a material guarantee, and the 'approved' contractor who undertakes installation, offers a workmanship warranty. In most cases, the material guarantee terms extend beyond the term of the workmanship warranty.

In modern building construction, a large range of differing materials and systems are used to construct the building envelope. Each of the installed systems will be supplied with its own individual guarantees and associated small print to be found in the T's and C's, leaving the client, being the property owner (developer or building owner), to manage the risk of these individual parts that make up the building envelope.

MANY OF THE GUARANTEES AND WARRANTIES OFFERED DO NOT COVER IMPORTANT AREAS SUCH AS:

1. The material guarantee matching the term of the workmanship warranty.
2. Perimeter detailing and construction.
3. Junction points between dissimilar materials.
4. Water ponding and debris build up.
5. Thermal, structural and acoustic performance.
6. Installation of associated building envelope technologies such as solar panels, walkways and fall arrest systems.

Most manufacturers are not able to cover the important workmanship or the ongoing maintenance of the building envelope. This creates a weak link in the construction supply chain, because most problems that occur are usually as a direct result of bad design, poor workmanship, and a lack of understanding of dissimilar material junctions that lead to leaks within the building envelope.



MAINTENANCE OF THE BUILDING ENVELOPE – IT'S CRUCIAL

After completion of the works and once the building has been handed over to the client, maintenance becomes the responsibility of that property owner. Each material/system that makes up the building envelope will have a different maintenance schedule, depending on its location and environment.

If correct, scheduled maintenance is not completed and signed off (as related to each of the differing elements that make up the building envelope), or if additional works like forming penetrations or the installation of solar panels, green roofs or living walls are then completed, most material warranties are invalidated – leaving the property owner to bear the risk of building envelope failure.

WHEN THE BUILDING ENVELOPE FAILS

At the point of building envelope failure, the weak link in the construction supply chain can be exposed between the small print in the material/system guarantees and the installation warranties – often resulting in difficulties in apportioning responsibilities, and again leaving the property owner holding the bill.

If a building envelope fails and there isn't a signed-off maintenance schedule, or if additional works were undertaken without prior authorization from the building envelope supplier, or if such works fall outside the term of 'approved contractor,' the charges for any remedial works are generally for the building owner's cost, or a commercial decision has to come from the supplier or contractor.

IT STARTS WITH DESIGN

The design element of any total building envelope is absolutely key to ensure its ability to withstand water ingress and provide the correct thermal and acoustic performance for the operational life of the building.



While there is often a lot of focus on the actual and individual materials that make up the total building envelope, the ability of the building envelope to perform is based on the individual details, all of which have to be designed in accordance with the latest building and construction regulations, including:

- Designing building envelope systems to suit performance
- Designed structure and building envelope tolerances
- Tried and tested perimeter detailing
- Correct understanding of thermal expansion
- Design of penetrations and associated building envelope accessories
- Thermal and acoustic calculations
- Junctions of dissimilar materials
- Water management

MATERIALS

There are many choices of materials and systems that can be used to construct a total building envelope solution. The correct understanding of the brief as well as the choice of system will directly affect the long-term performance of the building.

The environment and location of the building will dictate the type of coatings that can be considered as suitable for use on the materials of the building envelope. For example, must it be able to withstand the impact of a highly industrial area, or combat a coastal environment to ensure longevity? Such specialized coatings may cost more at the construction stage, but over the operating life cycle of the building, savings will be generated.

WORKMANSHIP

One of the most important factors to impact the long-term operational life of the total building envelope solution lies in its installation on site. All components of any building envelope system need to be installed correctly, step by step, to ensure optimal performance of the solution.

Confidence in the critical installation of the specified system should be backed with a workmanship warranty that matches the length of term of the building envelope system. In many cases, workmanship warranties do not match the length of term of the specified building envelope, thus creating a weak link in the contractual chain.

MAINTENANCE

One of the biggest dangers of maintenance is having inexperienced contractors assess the roof, without them having any knowledge of how the building envelope was constructed, or how to safely traverse the work area.

In terms of the current construction regulations and the Occupational Health & Safety Act, the property owner is responsible for hiring a competent person or company to do the works.

All installed systems must be maintained, and the scheduled maintenance must be completed and signed off by the supplier of that system. The frequency and manner of such maintenance is determined by the location of the site and the materials/ systems installed.

PROTECTING YOUR INVESTMENT

Protecting and maximizing returns is of primary concern for any developer or client, whether it is the initial cost of the building, vacancy levels, or the rental yield. Ensuring the operational life and value of the building stock starts at the earliest stages of design and carries all the way through to the maintenance of the building envelope. Critical decisions such as budgeting and shut-downs need to be planned for in an effective and streamlined manner. All too often, the client is caught unawares and when the building envelope fails, suffers the consequences of the gap in the construction service delivery chain.

There is a way to fill this gap. MRC Group has initiated the Guardian System Warranty, an innovative single-source, transferable building envelope warranty that covers up to 20 years of the building envelope's life, providing coverage not only for materials and workmanship, but also design and maintenance. This solution stands to benefit both the client and the industry as a whole.

For more information, contact Richard Polling at MRC Group on cellular (0)79 340 2318, e-mail him at richardp@mrc-group.co.za or visit www.mrc-group.co.za.

QUESTIONS TO ASK WHEN ASSESSING A WARRANTY

Does the building owner apply for the warranty?	
Does the warranty include the following?	
Design	
System Materials	
Installation / Workmanship	
Maintenance	
Do <i>all</i> the above aspects of the warranty provide the same length of term? (E.g., is the product and workmanship warranty the same?)	
Is the warranty a library of individual guarantees, or one single-source, all-encompassing warranty?	
Is the warranty a component, a material, paint finish/coating or system warranty?	
Does the warranty cover <i>all</i> aspects of the contractor-installed building system envelope?	
Does the warranty include the junctions between the different building envelope systems on the building?	

AFTER THE PROJECT HAS BEEN SIGNED OFF

Is the warranty transferable if the building is sold?	
Is the warranty still valid if maintenance is refused by the client?	
Is the warranty still valid if another contractor installs any associated technology on the roof?	
Does the client contact the warranty provider if there is any claim during the period of the cover?	
Can the warranty be renewed at the end of the term?	

See the light



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