

MAINTENANCE OF (BONDED) FAÇADE CLADDING

Prevention Is Better Than Cure

Modern bonded façade systems offer exceptional aesthetics, durability, and technical performance. However, even the highest-quality façade system requires proper inspection and maintenance to guarantee long-term reliability.

Unfortunately, façade maintenance is often overlooked once a building becomes occupied. Building owners and property managers are typically focused on tenant satisfaction and daily operational issues. Water stains are painted over, damaged ceiling tiles are replaced, and temporary sealant repairs are applied without first identifying the true cause of the problem. As long as the building appears functional, hidden façade issues often remain unnoticed. Only when visible damage occurs — such as mold growth, warped cladding panels, cracking, corrosion, or even falling façade elements — does the situation become critical enough to demand immediate action.

By then, repair costs can escalate dramatically.

Reactive Maintenance Is Expensive

When façade defects remain unresolved for too long, the consequences can become severe:

- Structural deterioration
- Moisture penetration
- Corrosion or wood rot
- Reduced insulation performance
- Safety risks
- Expensive emergency repairs
- Disruption for tenants and occupants

In many cases, what could have been solved with preventive inspection develops into a major renovation project with significant financial impact for owners, property managers, and tenants alike.

That is why one principle remains essential in façade engineering: **Prevention Is Better Than Cure**

An effective maintenance and inspection strategy protects not only the building envelope, but also the long-term value of the property itself.

At TWEHA®, we strongly recommend establishing a professional maintenance and inspection program immediately after completion of the façade installation.

Why Maintenance Matters in Bonded Façade Systems

Bonded façade cladding systems are designed for long-term performance. However, like every building component, they are exposed to:

- Wind loads
- UV radiation
- Moisture
- Temperature fluctuations
- Structural movement
- Aging of materials

A well-designed maintenance plan helps identify potential issues before they become serious failures.

More importantly, it allows owners to monitor the long-term durability of:

- The façade panels
- The adhesive bond
- The supporting structure
- Ventilation performance
- Moisture management

The Importance of Ventilation

One of the most critical factors in the durability of bonded façade systems is proper rear ventilation.

Adequate ventilation:

- Allow moisture behind the façade to dry out
- Prevents corrosion and wood rot
- Reduces thermal stress
- Minimize expansion and contraction differences
- Improves the lifespan of both the cladding and the supporting structure

Poor or blocked ventilation is one of the leading causes of premature façade problems.

Recommended Inspection Strategy

A professional façade inspection plan should always be based on a complete evaluation of the façade system, including:

- The façade panels
- The adhesive system
- The supporting substructure
- Mechanical and bonded connections
- Environmental exposure conditions

The objective is to identify possible failure mechanisms at an early stage.

Recommended Inspection Frequency

For most bonded façade systems, we recommend:

- **First inspection:** approximately 1 year after installation
- **Second inspection:** approximately 2 years after installation
- **Subsequent inspections:** every 5 years thereafter

The first years are particularly important because most façade incidents are caused by:

- Design errors
- Application mistakes
- Installation shortcomings
- Incorrect ventilation details

After this initial period, inspections should focus more on long-term durability and aging.

For façades installed on timber structures, more frequent inspections may be required due to the sensitivity of wood to moisture and ageing.

Visual Inspection Checklist

A regular visual inspection can already reveal important warning signs.

Key inspection points include:

Façade Panels

- Are any panels loose?
- Are panel corners lifting?
- Is there visible warping or deformation?
- Are cracks or fractures present?

Ventilation & Moisture

- Is condensation visible behind the façade?
- Are ventilation openings blocked?
- Is excessive moisture present behind the panels?

Adhesive & Structure

- Are there cracks in the adhesive joints?
- Is there detachment between adhesive and substrate?
- Is there corrosion or wood rot in the substructure?

If abnormalities are detected, additional investigation may be required through:

- Endoscopy
- Load testing
- Semi-destructive inspection
- Removal of selected façade panels for detailed analysis

Monitoring the Strength of the Bond

Where necessary, the adhesive bond itself can also be tested using controlled load testing methods such as vacuum load systems.

These tests help verify whether the bonded façade system continues to perform according to the required structural and safety standards.

A Structured Inspection Process

An effective façade inspection program should follow a clear step-by-step approach:

1. Collect all available project and maintenance documentation
2. Identify possible failure mechanisms
3. Perform a detailed visual inspection
4. Analyze all collected information
5. Conduct additional testing if necessary
6. Evaluate long-term durability and safety
7. Prepare a final technical assessment
8. Define maintenance and repair recommendations

This structured approach ensures reliable decision-making and avoids unnecessary repair costs.

Protect Your Investment

A bonded façade system is a long-term investment in aesthetics, performance, and sustainability.

But even the best façade technology performs optimally only when supported by proper inspection and preventive maintenance.

At TWEHA®, we believe that proactive façade management is not an expense — it is protection of your building's future value.

Because in façade engineering, as in every aspect of construction: Prevention will always be better than cure.

TWEHA®, 2026