TATA STEEL

TATA

Managing risk when delivering building fabric solutions

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INTRODUCTION

Complex buildings tend to attract complex solutions.

Design teams have to be confident that their scheme proposals achieve the necessary thermal performance. Not only that, but the necessary acoustic performance too. And the fire performance, wind resistance, durability, and structural stability. All with the right guarantee attached, and without needing excessive upkeep and maintenance.

The responsibility of maintaining an overarching view of a project might fall on one person in the team. One person who has to decide that the particular combination of products and components is the right solution.

How do you deliver a complex building without getting a complex of your own?

TAKING WIDER RESPONSIBILITY

One solution to delivering a project is to simply become risk averse. As of 2019, many insurers are attempting to guard against future liability issues by demanding a level of performance from a building that is excessive for what is actually required.

For the designer or specifier who doesn't want to take on any more risk, challenging that attitude is extremely difficult. Justifying a 'worse' performance spec for a product in one area of design - even though it meets the requirements for that area, and other performance considerations mean it is better suited to the project generally - is a tricky argument to make.

"Can you put that in writing?"

Product manufacturers love telling architects and specifiers what they need to know. They try to promote a thorough understanding of their speciality, forgetting that manufacturers of a thousand other components are vying for similar attention.

One way to ease the decision-making process, therefore, is to ask the manufacturer of each individual specified component to confirm that their product is being used in an acceptable way. The result is unwieldy email trails attached to every project.

Sometimes, product specification seems to have become about just one thing: collecting as many email trails as possible. If any uncertain detailing, or any product choice that could be deemed slightly risky, is questioned later then there is a piece of paper to demonstrate that, "The manufacturer confirmed it was okay."

The remit of a product manufacturer's technical advice doesn't include wider design responsibility. When consulting with a manufacturer, it's impossible to be certain that they have considered every possible knock-on effect of using their product in the manner proposed.

That's as much down to the quality of the information they are asked to review. Asking for a comment on one design detail could mean an issue elsewhere is missed. An inherent level of risk remains, despite the best attempts to avoid it.

Looking at everything in isolation still requires somebody to decide that everything works together.

'Building a Safer Future'

Being risk averse or adopting a silo mentality is a vicious cycle, made worse by the fact that passing off risk from one party to another only serves to compromise the end result. If we want quality buildings, we have to go through a detailed process that promotes quality and requires acceptance of an appropriate level of risk.

Dame Judith Hackitt's report, Building a Safer Future, sets out systemic failings in the construction industry as a whole. The attitude of "we've always done it that way" has contributed to what the report describes as a 'race to the bottom' culture.

Challenging the avoidance of risk is something the whole construction industry needs to step up to - otherwise, it's little wonder that attitude often wins out in the end.

Reform is backed by the likes of the BBA and LABC. And there is a substantial consultation ongoing where the Ministry for Housing, Communities and Local Government (MHCLG) are seeking industry's views on changing the way Building Regulations work to meet Dame Judith's recommendations.

SPECIFICATION TAILORED TO BUILDING FUNCTION

Taking a systems approach

Building a Safer Future advocates taking a systems approach when designing buildings; thinking about how the components of the system interact with one another to achieve complete performance.

To do that means moving away from the approach of seeking confirmation about individual components in relative isolation. For that to happen, though, specifiers are justified in saying, "We need help with that. We need more support from manufacturers."

At Tata Steel, we agree.

Using proven solutions

Designing a specification around the particular requirements of the building and its function adds certainty about how the building will perform. It also virtually rules out the possibility of somebody coming in and undercutting on price.

A lack of accountability and proper enforcement has contributed to that 'race to the bottom' culture. If less scrupulous contractors tender for a project on the basis of doing it faster or using inferior or unproven products, the end result is a compromised building.

Specifying a proven system puts the onus on anybody proposing an alternative to demonstrate the credentials of what they're offering - including that it is designed to meet the specific needs of the project in question, rather than being a generic system.

Building fabric performance is just the start

A manufacturer-backed system can cover the comprehensive list of performance elements - energy efficiency, acoustics, fire performance, weather resistance, durability - and help design out the complexity of the jigsaw puzzle of individual components.

There is a lot more to system solutions than the fundamental fabric performance, but that is always the starting point. Backed up by rigorous independent testing, a system offers combinations of products and components that get the fabric performance balance right.

Support with on-site check

Countering the risk of a compromised building means going beyond assistance at design stage. Achieving better construction quality demands contractor support too, helping them get the best from the system to ensure its longevity.

In the past, one of our team has stopped work on a site because a scheduled check revealed the contractor had purchased fixings that weren't part of the specification. If incorrect fixings are used and covered up, it allows the specifier and the building owner to believe the system was installed correctly.

The reassurance that comes from an extra pair of eyes cannot be underestimated. It holds the contractor accountable, and it gives the specifier and the client confidence that what was designed is being constructed. If an incorrect fixing failed during the guarantee, the building owner is left with an invalidated guarantee - and that is a risk they did not agree to.


OBAN HIGH SCHOOL
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TRACEABILITY AND REPUTABLE SUPPLY CHAIN

Confidence in components

Dealing with individual components and having a collection of email confirmations covering each one potentially means nothing. If the design fails, it's likely none of the component manufacturers involved will accept their product is responsible. They'll ask questions of the surrounding components.

While that can be seen as buck-passing, it's also an acknowledgement that everything depends on everything else. That's why a system approach works.

For a manufacturer to put their system through third-party testing and then offer a guarantee on it, they need to have complete faith in the components they're offering. It's more reassuring if the system supplier offers design and specification advice based on components they know will work as expected in the as-built project.

It's rare for a manufacturer to produce every component they supply, but working with trusted partners who can prove their own quality processes means the system supplier can offer a wide variety of options, all of which they have confidence in.

Supply chain control

By the same token, a system supplier has control over their production process and product performance by using consistent material supply routes, from raw materials to finished product. It's much easier to then offer a multi-decade guarantee, as the traceability of materials and products through the process gives the confidence that specifiers and building owners need.

That's in contrast to, say, importing a component from halfway around the world, where it's harder on a practical level to be sure of compatible quality standards - whatever reassurances the component manufacturer may give.

RESPONSIBLE SOURCING

Present and future impact

'Climate change', 'the climate emergency', 'climate breakdown' - whichever is the most appropriate terminology, it is now part of the conversation every day. Clients and building owners are more aware of it, and architectural and construction professionals are being reminded of their duties to promote a change of culture rather than 'business as usual'.

In the past, it might have been possible to employ some greenwash and make a building sound like a more sustainable or 'environmentally friendly' solution than it actually is. That's not the case any longer.

Part of managing risk is thinking about how a building will perform in 30 or 50 years' time, when the unpredictability in our climate will be more extreme than it is now. Sourcing raw materials and using them responsibly is a part of designing resiliency into our built environment, protecting building users from the effects of changing climate, and reducing our impact on already-depleted resources.

Environmental Product Declarations (EPDs)

Environmental Product Declarations detail the life cycle environmental impact of products or materials, providing transparent information. They are standardised documents, prepared in accordance with internationally recognised standards and independently verified and registered.

An EPD does not rate the product or material in question. The standardised presentation allows specifiers to make objective judgements between comparable EPDs, assessing the relative environmental impact of each.

There will be people who object to a steel manufacturer talking about environmental responsibility. We don't shy away from the embodied energy in steel production, but by using tools like Environmental Product Declarations, we do everything we can to ensure specifiers are able to make informed decisions about their designs.

Bespoke and system-specific EPDs are a much better reflection of a product's impact than generic ones. They help to highlight where manufacturers are making progress in their production processes, and give more accurate whole-building assessments.

LOWER COST OF OWNERSHIP THROUGH LIFE OF BUILDING

Quantitative and qualitative benefits

Ultimately, what much of this comes down to is reducing the cost of ownership for building owners.

The proven performance of a system reduces risk and removes uncertainty. Technical support from design to completion, coupled with dependable and enduring performance, means the building is constructed right first time, and it does what it was designed to.

A slightly higher capital cost can be quickly offset by lower running costs and reduced maintenance. And then there are the other benefits that are less easily quantified, like good building envelope fabric performance providing a more controlled and comfortable internal environment that is good for the wellbeing of occupants.

Why are guarantees important?

Guarantees are the perfect mechanism by which to capture the certainty and reduced risk that a system provides. That can easily be masked, however, by the headline figure of the number of years the guarantee is for.

If a system approach is to be more widely understood and accepted, it means looking beyond that number and understanding the level of support being offered by the system manufacturer. That obviously includes things like design and specification advice, and on-site checks during installation.

It also means knowing that the system delivers what is promised, and knowing what is needed to ensure the validity of the guarantee. The guarantee has to be worth something beyond a piece of paper.

Extra value comes from benefits like removing the need for unnecessary annual inspections to maintain the guarantee's validity - not only saving cost, but reducing future health and safety risks by avoiding work at height when it isn't necessary. It also comes from attaching the guarantee to the building, so it is simple to transfer from one owner to the other if the building changes hands.


SHURGARD
SELF-STORAGE

DEPENDABLE AND ENDURING PERFORMANCE

About Platinum® Plus

At the start we said complex buildings tend to *attract* complex solutions. What complex buildings actually need are *tailored* solutions.

That's where Tata Steel's Platinum® Plus guarantee comes in, helping to eliminate risk in building envelope systems. A Tata Steel system backed by Platinum® Plus features components selected from a broad range of compatible roofing and cladding products, the choice of which depends on the building type and function, such as:

- Insulated panels, including Trisomet® and Trimapanel®.
- Built-up systems (the Trisobuild® range).
- RoofDek.

These building systems are manufactured using Tata Steel's pre-finished Colorcoat® products. Using the best in range Colorcoat Prisma® or Colorcoat HPS200 Ultra® provides access to the Confidex® Guarantee for up to 40 years to complement the Platinum® Plus system guarantee.

The system guarantee incorporates a full range of accessories: all flashings, boundary gutters, fillers and sealants, ancillaries, stainless steel fixings, GRP rooflights, and safe link systems. All are from leading suppliers, all are independently tested and certified - and all are responsibly sourced and fully traceable through the supply chain.

In addition to BES 6001 responsible sourcing certification, Tata Steel are the world's first steel company to be approved to operate an Environmental Product Declaration Programme - meaning we can provide third-party verified, product-specific EPDs for all our building envelope systems, no matter what profile, coating or insulation thickness is used.

Support isn't just at the design stage. Once construction is underway, on-site checks make sure that the system is installed according to the specification. And at completion, a Platinum® Plus guarantee of up to 30 years is issued direct to the building owner. The guarantee is fully transferable, so it remains in place with a change of ownership.

Designers, contractors and building owners all enjoy the benefits of having a single point of contact for any questions about the system. There is no passing of responsibility or liability from one party to another; there is the peace of mind that comes from the long term reassurance of a manufacturer-backed guarantee.

Online specification builder

We've also developed an easy-to-use online tool that allows designers and specifiers to view 3D product previews, select their external finish and colour, generate building envelope system specifications, and manage multiple specifications, all in one place.

Our experienced Technical Team checks the specification for the designer, ensuring all choices meet the desired performance for their project needs.

The online specification builder is just another example of how Platinum® Plus provides guaranteed performance, and lower operating and maintenance costs, for the life of the building - a tailored solution offering dependable and enduring performance through the journey of a project, from start to finish.

Platinum® Plus features

- Up to 30-year guarantee.
- Single point of contact throughout.
- Specification support and site checks.
- Online specification builder.
- BES 6001 responsible sourcing certification.
- Third-party verified product-specific EPDs.
- Provided direct to building owner and fully transferable.
- Long term reassurance.

More information

To read more about Tata Steel systems backed by Platinum® Plus, download a Platinum® Plus brochure. Alternatively, contact us with any questions or to start an enquiry and find out how Platinum® Plus will benefit your project.

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