

5 costly mistakes to avoid while selecting building materials



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Choosing the right building materials is one of the most critical steps in construction or renovation. The materials you select determine the safety, comfort, and longevity of your home. However, many homeowners and developers often prioritise looks or short-term savings, leading to costly errors.

Here are five common mistakes people make when selecting building materials and how to avoid them.

1. PRIORITISING AESTHETICS OVER DURABILITY

It is easy to get caught up in the latest design trends. People often choose a material because it looks beautiful in a showroom or on social media. However, many trendy materials are not built to withstand heavy daily use. For example, a delicate floor finish might look stunning but could scratch or stain within months in a high-traffic area.

When selecting materials, always consider the wear and tear factor. A

high-quality ceramic tile or a durable stone might be a better investment than a stylish but fragile alternative. Sustainability in design starts with choosing products that do not need to be replaced every few years.

2. IGNORING THE LOCAL CLIMATE

One of the biggest mistakes is selecting materials that are ill-suited for the local environment. Materials that work well in a dry, cool climate may fail in a humid, tropical setting. For instance, certain types of wood or porous stones

can warp or grow mould if they cannot handle high moisture levels.

In warmer regions, it is essential to consider the thermal performance of materials. Dense materials like brick or concrete can absorb heat during the day and release it at night, affecting indoor temperatures. Choosing materials that help regulate heat and allow for natural ventilation is key to long-term comfort and energy efficiency.

3. OVERLOOKING MAINTENANCE REQUIREMENTS

Every material comes with a maintenance price tag. Some surfaces require specialised cleaning agents, regular sealing, or frequent polishing to maintain their appearance. Many people choose high-maintenance materials without realising how much

work is required to keep them looking new.

If you have a busy household or a large commercial space, look for low-maintenance options. Non-porous surfaces like ceramics are often preferred because they do not trap dirt and are easy to clean with simple, non-toxic solutions. Always ask about the long-term upkeep before making a final decision.

We often prioritise trendy looks over space management. It is vital to ensure our material choices allow for natural ventilation and daylight, rather than closing off essential openings for temporary storage.

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4. CHOOSING BASED ON PRICE ALONE

While staying within a budget is important, choosing the cheapest option often leads to higher costs down the road. Low-quality materials are more likely to break, fade, or fail prematurely. This results in expensive repairs and early replacements.

Instead of looking at the initial price, consider the “lifecycle cost”. A slightly more expensive material that lasts thirty years is far more economical than a cheap material that lasts only five. Investing in quality up front protects the value of your property and saves you from the stress of constant maintenance.

5. NEGLECTING HEALTH AND INDOOR AIR QUALITY

Modern building materials often contain synthetic chemicals and binders. Some of these can release volatile organic compounds (VOCs) into the air long after the construction is finished. This can lead to poor indoor air quality and health issues for the occupants.

People often forget to check the health certifications of their materials. To ensure a safe living environment, opt for natural or inert materials like clay, stone, and high-fired ceramics. These materials do not outgas harmful chemicals and help keep the indoor environment hypoallergenic and safe for everyone.

The next construction standard

FROM SI

BUILDING FOR THE FUTURE

The shift toward sustainable building is driven by the realisation that construction quality and environmental responsibility are two sides of the same coin. In a delta land prone to extreme humidity, salinity, and seasonal flooding, the durability of materials is paramount. Traditional burnt bricks, for instance, have long been the backbone of local construction, yet they are responsible for significant topsoil depletion and air pollution. Reports from The Daily Star and Prothom Alo have frequently highlighted how the thousands of brick kilns surrounding urban centres contribute to Dhaka often ranking as the city with the worst air quality in the world. As the government moves to phase out these bricks



ceramics sector, which has become a cornerstone of the building material industry in Bangladesh. According to the Bangladesh Ceramic Manufacturers and Exporters Association (BCMEA), the country now hosts 62 ceramic companies with a combined annual production capacity of 207 million square metres of tiles. This scale of production, while economically vital, generates thousands of tonnes of ceramic sludge annually. This residue, a byproduct of intensive water recycling, is rich in calcium carbonate but does not decompose, posing a threat to soil and water bodies if dumped irresponsibly.

Leading the charge in turning this environmental liability into a resource is DBL Ceramics through its TileChalk initiative. This project exemplifies how circular economy principles can be applied to the construction supply chain. By drying, crushing, and refining ceramic sludge, the company has managed to produce high-quality classroom chalk. Within just three months of implementation, 10 tonnes of sludge were diverted from landfills to produce over 21.6 million chalk sticks. This move did more than just clean up an industrial backyard. It lowered production costs for local chalk manufacturers by approximately 40 per cent and revived failing factories, preserving local jobs and reducing the nation's import dependency on calcium carbonate.

DRIVING COMPETITIVENESS THROUGH SUSTAINABILITY

The success of such circular initiatives has gained international acclaim, securing a Bronze Award at Spikes Asia 2026 and a Silver

Lotus at ADFEST 2026. These accolades mark a rare instance of a Bangladeshi industrial approach gaining recognition for creative B2B and sustainable Lotus categories. However, the true impact lies in the decision to make these recycling formulas open source. By sharing the technical formulation across the industry, the sector has signalled a shift toward a collective responsibility model.

This open approach ensures that the entire industry can transition toward zero dumping of ceramic sludge. It also addresses the plastic-based tool dependency in classrooms by repurposing broken tiles into lightweight, reusable slates. As Bangladesh continues its journey toward becoming a developed nation, the adoption of these green standards is becoming a requirement for global competitiveness. Bangladesh already leads the world in the number of LEED-certified green garment factories, a trend that is now influencing the commercial and residential real estate sectors.

In conclusion, the construction boom in Bangladesh is at a crossroads. The path of least resistance leads to environmental degradation and rising long-term costs. The alternative path, paved with sustainable materials and circular economy initiatives, offers a blueprint for a resilient future. By transforming waste into value and prioritising durability over temporary savings, Bangladesh can ensure that its urban growth is not just rapid but also enduring. A sustainable future is built by those who see potential where others see only waste.

Can Ceramics Build a Sustainable Future?

FROM SI

The ceramic industry has undergone a quiet revolution in how it handles resources. Modern manufacturing now focuses on closed-loop systems where water and raw materials are reused rather than discarded. One of the most significant advancements is the management of ceramic sludge, a byproduct of the production process. Instead of letting this residue become industrial waste, innovative companies are now drying and refining it to create new products, such as educational tools or construction fillers. Responsible sourcing is also becoming the industry standard. Many manufacturers now utilise recycled content from broken tiles or glass to create new collections, reducing the need for virgin clay and minerals. This commitment to a circular economy ensures that the industry cleans up its own backyard while providing high-value materials to the market. When waste is reimagined as a resource, the

environmental cost of production drops significantly, allowing for a cleaner industrial landscape.

Connecting the Aesthetic Value

There is a profound link between design quality and sustainable consumption. When a space is designed with high quality, beautiful

the cycle of constant consumption and toward a model of conscious investment. By prioritising materials that offer long life, health benefits, and responsible origins, we create spaces that are not only beautiful but also resilient. The choice of a tile is no longer just a finishing touch. It is a

Beyond their physical toughness, tiles contribute significantly to the health and comfort of the people living within a space. Indoor air quality has become a major concern in modern construction, where many synthetic materials emit volatile organic compounds or VOCs.

materials, people are more likely to care for it and less likely to tear it down. This emotional durability is a key component of sustainability. If a surface is timeless in its design and superior in its craft, it transcends trends. Sustainable surfaces encourage us to move away from

statement of intent for a future where our buildings work in harmony with the environment rather than at its expense. As we continue to redefine what it means to build well, ceramics prove that the most beautiful surfaces are the ones that are built to last.



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in favour of concrete blocks and alternative materials, the industry is learning that sustainability is synonymous with performance.

This transformation is not just about meeting regulatory standards but about addressing the rising urbanisation and higher expectations for durability. Modern construction must account for the fact that the environment is no longer a static backdrop. Higher temperatures and unpredictable rainfall patterns mean that buildings must be resilient. By choosing materials that reduce waste and energy use, developers are creating structures that can withstand the test of time while minimising their ecological footprint.

CIRCULAR ECONOMY SOLUTIONS

A prime example of this industrial evolution can be seen in the