



Responsibly Yours

# REalVIEW

a monthly realty news digest

Dear Readers,

REalVIEW is a monthly news digest bringing to our clients and well-wishers news updates on major developments in the realty industry. The periodical will keep the readers updated on the significant changes and trends affecting real estate development within the country as well as globally, thus helping them in taking informed and calculated investment decisions.

Responsibly yours,

V. Sunil Kumar  
Managing Director  
Asset Homes

## The biggest change maker in India's real estate - Green Construction



### What are Green Buildings?

- Green buildings are created using environment-friendly and energy-efficient methods throughout the building's lifecycle – from design, construction, operation, maintenance, renovation to deconstruction. The buildings must follow all or most of the following:
- Preserve the natural environment of the location as much as possible.
- Make maximum use of daylight to minimize the use of electricity.
- Implement various passive strategies including orienting the longer facades to face north and south, providing adequate shading to the building façade and envelope, optimizing building form and siting to reduce heat ingress etc.
- Design high performance building envelope to reduce heat ingress
- Use energy efficient lights and high performance HVAC equipment and systems to reduce energy use
- Ensure good indoor air quality so the use of AC is optimised, without hampering thermal comfort or occupant well-being.
- Use renewable sources of energy such as solar, wind, biomass to reduce use and dependency of fossil fuels
- Additionally, the construction materials must be sourced ethically and be recycled as far as possible. They should also be environment-friendly and not have adverse health impact.
- Green buildings can reduce energy consumption by 20-30%, water usage by 30-50% and reduce waste generation significantly by extensive recycling. However, a latest report by Anarock says that as of September 2017 only about 5% of the buildings constructed in India were registered for green technology. This is highly concerning, considering a recent WHO survey has pointed out that 13 of the 20 most polluted cities in G-20 are in India.

## The Way Forward

A green building transcribes into a healthier environment and better ecological balance. Though the initial cost of developing these buildings is higher by 10-15%, in the long run low operational costs make them a viable option. And of course, the fact is we are a nation with limited resources and an ever-increasing population! We can't solely rely on the Government to provide non-renewable resources forever. The faster we adopt Green, the higher our chances of living a better life. And considering the impact of the real estate sector on the environment, green buildings are the best way to go green.

This is perhaps why there is an increasing governmental push for creating Green buildings, with incentives and subsidies for sustainable buildings. Moreover, the general public is also becoming more concerned about the future of the planet and is looking for Greener alternatives in all aspects of their lives. In fact, a lot of buyers are highly concerned and specifically check for the 'green' certificate before making an investment. With this in mind, developers are exploring new ways to build and sell green developments and still stay profitable.

### Renaissance for artisanal mortar

To adapt mortar to new building materials and industrial methods, the content in walls and plaster changed during the 20th century. The change meant that knowledge of historical



materials and methods for producing mortar were lost. New research at the University of Gothenburg reveals that historical binding agents and mortar can be produced and used in present-day plaster restorations.

"We need to reclaim this knowledge to care for and preserve historic buildings constructed with other materials than those used today," says Jonny Eriksson at the Department of Conservation at the University of Gothenburg, the author of the new thesis.

## Renaissance for artisanal mortar



### Millennial history

The production of plaster and mortar for buildings goes back thousands of years in Sweden. For a long time, builders made plaster and mortar using traditional techniques, but with industrialisation the process changed.

"The change involved using new materials and methods to make mortar. At the same time the knowledge of craftspeople on how to make binding agents and mortar for bricklaying and plastering in different situations was lost."

The lack of knowledge first became apparent late in the 1960s because the new mortars were damaging historic buildings.

"For long-term and sustainable maintenance of historic buildings, we need to reclaim knowledge that has been lost," Jonny Eriksson says. "And this requires collaboration among crafts and professions such as architects, engineers and antiquarians. More craftspeople also need to be trained in research on building conservation."

### Investigations in medieval church

For his thesis Eriksson investigated the formation of shrinkage cracks in plaster. He has studied the feasibility of using mortar mixed with the traditional proportions in use until the 19th century. He conducted his investigations will restoring plaster on

a medieval church in Tanum municipality in northern Bohuslän.

"It became apparent that it is practical today to make and use the old-style of mortar. These mortars with a high content of binding agents need to be mixed with newly slaked lime, which is lime that has just been slaked with water," says Eriksson.

During the 20th century, builders discouraged this particular production process. They thought it produced defects in the plaster. Instead they recommended preparing slaked lime one to four weeks before use.

"This was contrary to fundamental practices in the 19th century, when recommendations called for the use of newly slaked lime. The rationale was that this made the mortar more durable."

The research results show that the older artisanal mortar with a high content of binding agents can also be made today. It also shows that the mortar can be used for plaster without unacceptable shrinkage cracks or blisters from unslaked lime.

"Our experiences with using these old-fashioned mortars in various construction projects indicates that the mortar has good durability. But the lime needs to be newly slaked when used and not stored after slaking nor processed to be packed in a bucket or barrel for later use, for example," says Eriksson.

### Facts

Slaked lime is produced by mixing lime and water. This releases energy in the form of heat, and slaked lime forms. Depending on how much water is introduced into the process, slaked lime forms as either dry powder or a wet paste. Slaked lime is used in the building materials industry and for water and flue gas treatment.

Wet slaked lime is quicklime that has been slaked with an excess of water so that it forms a lime paste. Normally this lime is stored for some time before it is mixed with sand to make mortar. Storage is done to avoid damage.

Making mortar with newly slaked lime involves slaking the lime before mixing the lime with sand. In other words, the lime is used immediately and is not stored.

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