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We shape a **safe**, **high quality**, **sustainable** and **friendly** built environment.



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- p2-4

\$15 Million for Sustainable
Construction • p5

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Unified through Design
• p8-9

Singapore's Green
Showcase for China • p14

Samwoh

Eco-Green Building

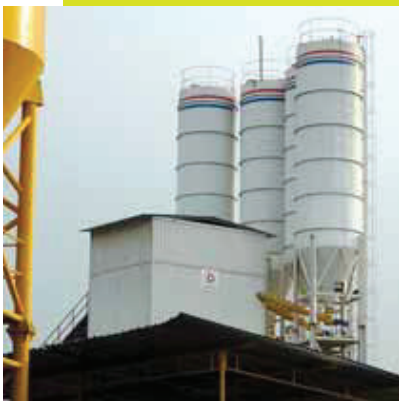


The Samwoh Eco-Green Building (Photo credit: Samwoh Corporation)

When it was unveiled on 22 March, the Samwoh Eco-Green Building was the first building in Singapore – and possibly one of the first few in the world – to use concrete made with 100% recycled concrete aggregates for the top level.

In addition, the first and second levels were constructed with concrete using 30% and 50% recycled concrete aggregates respectively. Another unique feature of the building was the use of fibre-optic sensors embedded in the columns to monitor the long-term structural performance of the concrete. The results obtained from the study will be useful for in-depth structural analysis and the formulation of future specifications on the use of recycled concrete aggregates for structural concrete.

The Eco-Green Building was the result of a joint project between Samwoh Corporation, BCA and Nanyang Technological University to conduct a full-scale evaluation on the use of various percentages of recycled concrete aggregate in structural concrete for building structures. The project, which began two years ago, was one of 11 sustainable construction related projects funded by the MND Research Fund for the Built Environment.



The Samwoh Ready-Mixed Concrete Plant

The Eco-Green Building is one of three premises sited at the Eco-Green Park. The second premise, the Asphalt Recycling Plant, employs state-of-the-art technology to recycle asphalt pavement waste into asphalt mixtures for road construction. The recycling of the asphalt pavement waste will help to alleviate waste disposal problems as well as reduce the demand of natural aggregates and bitumen needed for the construction industry. The third building, the Ready-Mixed Concrete Plant, is also equipped with recycling facilities which will produce eco-concrete with the recycled materials.

The successful completion of the Eco-Green Building not only proves the viability of using recycled concrete aggregate for structural works. It also signifies a breakthrough in the research and development of sustainable materials for the industry. Samwoh's success in this sustainable construction journey will pave the way for greater sustainability and environmental consciousness and increase the confidence of developers, consultants and construction companies in adopting recycled materials for future construction projects.