Edinburgh's Newest Affordable Housing Development Nears Completion

Edinburgh's newest social housing project at Lochrin Basin in the Fountainbridge area of Edinburgh is close to completion with the first tenants expected to move into the attractive apartments by early June. Designed and constructed by leading family house-builder Mactaggart & Mickel in partnership with Dunedin Canmore Housing Association, the two 3 – 4 storey blocks, containing 22 affordable 1 – 2 bedroom apartments mark the latest phase in the redevelopment of the site in the proximity of the historic Union Canal.

Lochrin Basin is the first venture into Scotland's social housing market by Mactaggart & Mickel Contracts. Celebrating its 85th anniversary this year, it was in the mid-1920's that the quality family house-builder first proudly undertook contract work for the Glasgow Corporation and Western Heritable. The development at Lochrin Basin is finished in a mix of contemporary, locally procured materials including masonry, glazing and zinc, the apartment blocks provides residents with access to an attractive landscaped courtyard, car parking and bike storage. With construction on the site having started in June last year, the success of the project signifies the robust partnership formed between Dunedin Canmore Housing Association (DCHA) and Mactaggart & Mickel and a shared objective to deliver a sustainable and quality project on time and on budget.

Commenting on the development, Mairi Mickel, Head of Corporate Communications at Mactaggart & Mickel said: "Mactaggart & Mickel is very proud to have worked with Dunedin Canmore Housing Association and Michael Laird Architects to provide the City of Edinburgh with a high quality social housing development at Lochrin Basin. From the outset, this project has reflected all parties commitment to partnership working and the highest quality of delivery. With other such projects in the pipeline, Mactaggart & Mickel is firmly committed to working with registered social landlords and others to create new affordable housing communities."

Ewan Fraser, chief executive of Dunedin Canmore Housing Association, said: "It has proven greatly advantageous for Dunedin Canmore to work in partnership with Mactaggart & Mickel, a financially robust family house-builder who have a reputation for building very high quality houses. We are very pleased to have worked with the leading housebuilder on this urban regeneration project that will help meet the high demand for affordable housing in the capital."

The Lochrin Basin development incorporated Dunedin Canmore's own design parameters and the one-stop-shop approach of Mactaggart & Mickel's Timber Systems division. From initial concept, planning and design to on-site delivery and construction, this modern construction method provides the customer with a streamlined, cost-effective and timely build process. While during construction the interior of a traditional brick and mortar house can be exposed to the elements for weeks, Mactaggart & Mickel Timber Systems delivery of a sealed unit on site, complete with services installed, ensures the apartment or house is wind and watertight in just one day.

The Turtle House and Kid's Fish House, El Gouna, Egypt

Interested in the work of the renowned German Designer Kurt Völtzke, the Egyptian investor and owner of El Gouna (Red Sea), Samih Sawiris had the Kid's Fish House erected for his private town. At the same time the Designer was commissioned with the development of Turtle House, a gallery and guest house. Now the Turtle House rises from the green of the golf course like an artistic sculpture reminiscent of buildings by Hundertwasser or Gaudi. The architecture is unique and has a positive effect on everyone who views it.

The Turtle House was inspired by the regional architectural symbolism of the dunes in the Sahara desert and the waves of the Red Sea. The Designer had this architectural jewel erected in only seven months. Like the outside, the interior of the house is predominated by bright, natural stone. Coloured columns with ornate mosaics decorate the gallery and each stairway finishes off in an imaginative sculpture. The Designer is known for his novel designs and inspirational ideas.

"Smart Salad Dressing" Can Save Venice… and the World

The historic city of Venice is sinking. The world is warming and sea levels are rising. But now a group of scientists and architects are developing an unlikely new technology, which, they claim, can save first Venice... and then the world.

They will unveilled their plans at the launch in London on 26 February of a new initiative called Future Venice (www.futurevenice.org) and at a London Building Centre architecture conference the same day, which explores new ways of turning buildings into living things.

The British and Danish-led team behind Future Venice are dubbing their new technology "smart salad dressing", since, like the stuff you splash on your salad, it consists of olive oil droplets in water. But what makes it "smart" is that the droplets are programmed to transform CO_2 into a limestone-like rock.

The net result is the ability to stop Venice drowning beneath rising sea levels by growing an artificial limestone reef around the city.

The new technology is able to turn buildings into living, growing things, able to repair themselves. It offers hope not just to the Venice but to other cities across the world threatened by rising sea levels.

The driving force behind Future Venice, and co-organizer of the accompanying Building Centre architecture conference, is Rachel Armstrong, a British scientist, writer and polymath, who trained as a doctor but now teaches at University College London's Bartlett School of Architecture.

"Future Venice is an initiative for bringing together specialists from diverse fields – including science, architecture, computing and the arts – to find new ways of tackling the environmental and architectural threats to Venice", says Armstrong.

Beyond Venice, the aim is to turn the same technologies into a new weapon against climate change and rising sea levels worldwide.

"The technology we're talking about will be ready in three to five years", says Armstrong.

Armstrong and colleagues are working to develop a new approach to architecture, which will enable buildings to become living things, grow their own skins, capture carbon and turn toxic by-products into artificial limestone.

"All buildings today have something in common", says Armstrong. "They're made using Victorian technologies. This involves blueprints, industrial manufacturing and teams of workers. All this effort results in an inert object. And that means that there is a one-way transfer of energy from our environment into our homes and cities. This is not sustainable. The only way that it is possible for us to construct genuinely sustainable homes and cities is by connecting them to nature, not insulating them from it."

Future Venice is pioneering the new "living architecture" that will make this possible.

At the heart of the new "living architecture" are "protocells" – small, artificial, olive-oil like cells of fat that can be applied to the surface of a building to form a sort of coating. These protocells are able to capture CO_2 and convert it into solid pearls of artificial limestone or "mock rock". This frosting of "mock-rock" not just protects the building but even repairs cracks.

Protocells are artificial cells that lack DNA but share many of the properties of living cells. In time, they may even be able to replicate like living cells.

"A protocell is a little fatty bag", says Armstrong. "And it's got a chemical battery in it. This little bag is able to conduct itself in a way that can only be described as living."

The aim of Armstrong and colleagues is to adapt the protocells for use underwater and so create a mock-rock reef around Venice able to save the city from drowning.

"We have already seen the protocell technology produce limestone shells in the lab. Our efforts in the next few years will be to refine this process to create a system that can exist on the outside of buildings and in watery environments. Ideally, we hope to make a very simple formula that will be freely available to developing countries that can be made as simply as a cooking recipe".

"We are also setting up processes for bringing the current research to market."

Armstrong's chief collaborators on Future Venice are Martin Hanczyc, a chemist from the Institute of Physics and Chemistry in Denmark, and Neil Spiller, Professor of Architecture at University College London's Bartlett School of Architecture.

The "living architecture" approach that Future Venice is suggesting is a radical alternative to the best previous hope for saving Venice. The latter is an ambitious engineering project, using a system of system of 78 steel floodgates. These floodgates will provide a controllable barrier at the lagoon's edge, so enabling the modulation of the relentless onslaught of the Adriatic Sea.

Critics, however, claim that this large-scale mechanical scheme would have several important drawbacks.

"The big idea behind Future Venice", says Martin Hanczyc, "is to tackle the threats facing Venice (rising damp and sea levels, subsidence, lagoon-bed erosion) – as a way of bringing together those people who are developing new technology and materials with those who are planning, shaping and dreaming futures for our cities and buildings."

Venice, in short, is the poster child of the new "living architecture" (also known as "grunge architecture").

Today Venice, tomorrow the world.