

# The innovative Interview Michael Pawlyn

In conjunction with **RJBA**

Michael Pawlyn founded design innovation firm Exploration in 2007 and, together with his colleague Yaniv Peer, the practice has developed a reputation as a pioneer in the field of biomimicry (an approach that seeks sustainable solutions to human challenges by emulating natural processes and strategies). Prior to setting up Exploration Pawlyn worked at Grimshaw for 10 years and was central to the team that designed Cornwall's Eden Project. More recently Pawlyn was part of a team of architects and engineers that designed the Sahara Forest Project, a system that combines seawater cooled greenhouses with forms of solar energy to provide food, fresh water and clean energy in arid areas. A pilot scheme has been built in Qatar and another one has just gone on site in Jordan. Currently he is working on a zero waste textiles factory in India that is due to go on site in late 2018, a mountain data centre (to be built inside a mountain in order to utilize the free cooling) and a residential refurbishment in North London with a hyperbolic paraboloid roof.

*Michael Pawlyn is taking part in a talk on 'Design driven by natural forces' on Wednesday 25 January at 16:15 in Olympia National Hall.*



## What new materials or technologies are you working with and why?

We've been working with digital tools such as genetic algorithms to help us design buildings in a way that is much closer to the process of evolution. The principle is that you can set certain rules that the building is supposed to abide by, such as minimum floor-to-floor height or minimum and maximum daylight factors, and the genetic algorithms generate thousands of variations and mutations and tests them against the parameters that you have set. After testing a whole series of variations, it kills off the less acceptable ones and then the successful ones are multiplied and the process starts again. You end up with something highly optimized to quite a complex set of sometimes competing parameters.

## What is a recent project that has captured your imagination?

It's not super recent but I am a huge fan of a scheme in Seoul, South Korea. In 2003 a 16-lane elevated motorway that had been built over a river in the 70s was torn down and the river restored and transformed into a linear park. It not only reconnected two parts of the city but lowered temperatures in its environs and improved air quality.

## What would make your life as an architect easier or more rewarding?

Working in an environment that actually promoted and rewarded innovation more effectively. We have almost all the solutions we need to meet the challenges of our age but the pace of change is just woefully slow. If governments had a bit more courage they would factor in the true costs of materials and use financial and legal instruments to stimulate innovation and the more efficient use of certain materials.

## Who would you invite to your ideal dinner party?

Edouard François, an eccentric French architect who uses a lot of vegetation in his buildings; Edward O. Wilson, a famous biologist who came up with the biophilia hypothesis that suggests that humans have an innate tendency to seek contact with nature; Susannah Hagan, who teaches at the RCA and wrote a wonderful book called 'Ecological Urbanism'; Pierluigi Nervi; Buckminster Fuller; Dana Baumeister, one of the co-founders of the Biomimicry Institute in the US; Polly Higgins, an international lawyer who is working to get the UN to recognize the destruction of the planet as an international crime.

## Which book(s) on architecture have had a strong impact on the way you work?

The most influential books for me have been non-architecture tomes such as 'Cradle to Cradle' by William McDonough and Michael Braungart, 'Natural Capitalism' by Paul Hawken, Amory B Lovins and L. Hunter Lovins, 'Biomimicry' by Janine Benyus and George Monbiot's book 'Feral'. I thought 'Feral' was a real development in the environmental debate. It's about moving to a more positive paradigm that is about regenerating ecosystems rather than trying to be sustainable, which all too often is just about mitigating negatives.

## The theme of this year's ARCHITECT@WORK is water and you are taking part in a talk called 'Design driven by natural forces'. What will you focus on?

I will talk about what we can learn from nature about how to manage, gather, store and harvest water because biological organisms have solutions to all those things. As a practice we have been looking at camel nostrils, which are miracles of water recovery engineering.

*words by Giovanna Dunmall*

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