



PHOTOGRAPHS: DANIELE MATTIOLI, WOLFGANG STUPPIY; ILLUSTRATION: HEATHERWICK STUDIO

# The seeds of creativity

The Seed Cathedral is a spectacular way to put Kew's conservation work on show to the world



Kew's MSBP aims to save seed of 25 per cent of the world's wild plant species by 2020

Inspired by the work of Kew's Millennium Seed Bank Partnership, the UK Pavilion at the Shanghai World Expo is stirring up plenty of interest. [Christopher Stocks](#) finds out why

When government officials gave renowned designer Thomas Heatherwick the brief to design the UK Pavilion for this year's international expo in Shanghai, they were keen for it to reflect our thriving economy (I know, I know, but this was back in 2007), as well as the Government's commitment to sustainability. 'Oh, and by the way,' they added, 'we'd like you to make sure the UK Pavilion is in the top five.' Thomas chuckles at the memory. 'No pressure then!' he recalls, when I meet him in his London studio.

But they got what they wanted – Thomas Heatherwick's extraordinary pavilion is reckoned to be second only to China's own as the star attraction of the entire 240-pavilion, 5 km<sup>2</sup>, \$50 billion World Expo, which opened on 1 May this year and runs until 31 October. In June it also won the Lubetkin Prize from the Royal Institute of British Architects for the most outstanding piece of international architecture.

The UK Pavilion's astonishing outline is created by 60,000 transparent acrylic rods, each 7.5 m long but just 22 mm thick. These sway gently in the breeze and give it the look



Left and overleaf: architectural plans for the UK Pavilion by the Heatherwick Studio

Thomas Heatherwick's design brings together UK creative talent, scientists and botanists



PORTRAIT: RICHARD CANNON; PHOTOGRAPHS: DANIELE MATTEOLI, WOLFGANG STUPPY; ILLUSTRATION: HEATHERWICK STUDIO

Right: 217,000 seeds from edible or useful species are set into the tips of the rods



Above and top: built on site in Shanghai this spring, the pavilion is open until 31 October

*'Rather than trying to sum up the whole of the UK, we focused on a natural object to show how important nature is to the British people'*

of a 20 m-high pincushion hovering above an enormous sheet of crinkled paper.

'We knew there were going to be 240 different pavilions to compete with,' says Thomas, 'and that most of them would be very high tech, all flashing lights and electronics. So we decided to do something different – something calmer, in the spirit of British parks and gardens, which offer an escape from the frenetic world outside. But we still wanted to create an iconic object: the world's largest hairy building!'

Christened 'The Dandelion' by Chinese visitors, it may look like a spectacular bit of showmanship, but it also has a serious purpose, as Thomas explains. 'The idea for the pavilion really originated with Philip

Dodd (former director of the Institute of Contemporary Arts), who suggested that rather than trying to sum up the whole of the UK, we focus on a natural object to demonstrate how important nature is to the British people. I didn't want to do plants and flowers, because the results could easily have looked pretty conservative, but then I remembered about Kew's Millennium Seed Bank Partnership (MSBP).'

Before long, Thomas and Philip were on their way to the Millennium Seed Bank at Wakehurst Place, where they met its director, Paul Smith, and seed morphologist Wolfgang Stuppy. Wolfgang's enthusiasm was infectious, and seeing the amazing range of shapes and sizes that seeds come in

was a revelation. 'What's great about seeds,' Thomas says, 'is that they often look quite insignificant to the naked eye, but they're all so full of potential. That gave me the idea for a Seed Cathedral, which is what I call the pavilion – it sounds ridiculous, I know, but that's the vision I had. It's also such an intriguing name: when you say "Seed Cathedral" people think, "What's that?"'

What indeed? All is revealed when visitors, having snaked around the exterior of the pavilion, finally cross the bridge that leads inside. Going from bright daylight, it takes your eyes a few moments to adjust to the comparatively dim light of the interior – just like entering a cathedral, as Thomas is keen to point out. But then what you see



The UK Pavilion is introducing Kew's vital conservation work to 50,000 visitors per day

## These are the seeds that make the world go round – ingredients of food and medicine or important raw materials

is as astonishing as the show-stopping spectacle outside. For every one of those 60,000 clear acrylic rods projects into the cave-like interior space, bathing it in a lambent light that has been transmitted along their 7.5 m length from outside. As Thomas explains, slightly tongue in cheek, 'Really it's just a giant version of a 1970s fibre-optic lamp, scaled up so you can get inside.' At night it's even more like a giant lamp, as tiny light-emitting diodes hidden inside the rods bathe the entire structure in a gentle, unearthly glow.

Look closer though and it becomes apparent that there's something unusual about the individual rods. They're completely transparent, but in the end of each one a handful of seeds is suspended like a fly in amber (adding up to more than 217,000 seeds in all). And they're not just any old seeds. Chosen by Wolfgang Stuppy from around 1,000 different species, you could say that these are the seeds that make the world go round. Some are essential ingredients of food and medicine, such

such as rubber (*Hevea brasiliensis*) and teak (*Tectona grandis*). Others were chosen for their potential as sources of sustainable energy, like the castor oil plant (*Ricinus communis*) and the physic nut (*Jatropha curcas*), or their role in environmental regeneration, such as alfalfa (*Medicago sativa*) and sunflowers (*Helianthus annuus*).

All these colourful and intricately beautiful seeds have highly practical uses, but the fact that they form the heart of the UK Pavilion also gives them a strongly symbolic role to play. Most importantly for Kew, it puts the work of the MSBP on the world's stage, giving it a once-in-a-lifetime exposure to the most populous country on Earth: a staggering 70 million people are expected to visit the Shanghai World Expo over its six-month run, and within a week of its opening the UK Pavilion was welcoming around 50,000 visitors a day.

'We're just hoping it won't wear out!' jokes the pavilion's ebullient lead architect, Katerina Dionysopoulou. The seeds also

as coffee (*Coffea arabica*) or *Ginkgo biloba*, or important raw materials,

symbolise the friendly links between Britain and China – while the species were chosen in consultation with MSBP staff, the seeds themselves were provided by the Kunming Institute of Botany in Yunnan, which is not only one of the MSBP's global partners but also holds Asia's biggest seed bank.

'Only an optimist would build a seed bank,' says Wolfgang. 'If there was no hope for a brighter future, there would be no point in collecting all these seeds. Right now, anything is still possible.' And if that's the message visitors take away from the UK Pavilion, you can tell that Wolfgang would be very pleased. 🌱

*Christopher Stocks is a freelance journalist and author of Forgotten Fruits, available in Kew shops, £8.99*

*The UK Pavilion has several sponsors, including the UK Government, British Council and Barclays PLC*

*Please consider supporting the work of the MSBP through the new Kew Fund (see p10) or by adopting a seed – for details see [www.kew.org/adoptaseed](http://www.kew.org/adoptaseed)*

*STOP PRESS visit the Shanghai Expo exhibition at Kew this October – see [www.kew.org](http://www.kew.org) for details*



Daylight flowing through the transparent rods illuminates the cavernous interior

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