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**Life in a box: the
shipping containers
students call home**



WORLD

Portrait of a living TV legend

LONDON

A **SPECIALLY** commissioned photograph of Sir David Attenborough will be displayed at the National Portrait Gallery in London to honour Britain's greatest living legend.

In a national poll conducted last year, the 81-year-old natural history presenter was named Britain's top living icon, beating former Beatle Paul McCartney.

The London gallery commissioned the portrait as a result, and it went on display this weekend to coincide with the final



UN Burma envoy meets Suu Kyi

RANGOON

PRO-DEMOCRACY leader Aung San Suu Kyi yesterday met visiting UN envoy Ibrahim Gambari, a day after Burma's junta rejected calls to include her in its election process.

She was taken in a convoy from her home, where she is under house arrest, to a military facility where Mr Gambari has conducted most of his meetings since arriving on Thursday.

Mr Gambari has tried to foster a dialogue between Ms Suu Kyi and the military after a crackdown on anti-government protests in September, during which the UN estimates at least 31 people died.

He was expected to press the regime to include Ms Suu Kyi's National League for Democracy in its



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Ship shape

They click together like Lego, will outlast the Pyramids, and, as construction materials go, are cheaper than concrete. Shipping containers might not be glamorous but they could be the holy grail of cheap housing.

In Amsterdam, a cohort of people with limited money are boxing themselves in.

Keetwonen is a development of 1050 shipping containers, converted into crash pads for students for €250 (\$410) a month. Each of the brightly-coloured units has a private balcony. A cafe, supermarket and a communal sports area complete the complex.

While the container developments might be suited to the short-term housing needs of budget-conscious students, to many home-buyers they would be a turn-off.



Cheap living ... stacks of containers have been converted into affordable student digs in Amsterdam.

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They can be customised but the load-bearing steel walls are difficult to cut into, meaning one is stuck with a basic building unit that is long and narrow.

Still, given the containers' immutability, it is amazing what uses have been made of them. Theatre troupes have transformed them into travelling theatres, musicians have used them as sound-recording



Cheap living ... stacks of containers have been converted into affordable student digs in Amsterdam.

Photos: Christian Lutz/Agence VU

studios, and American artist-architect Adam Kalkin even made a retractable cafe out of one.

From the outside Kalkin's cafe looks like a slightly banged up, rust-coloured box, until it unfurls like a *Transformers* toy.

Kalkin also makes Quik Build houses from six modified shipping containers, for about \$US184,000 (\$198,500) each.

Kalkin has so many orders that there is a six-month waiting period.

The Dutch are not alone in embracing boxed living.

In London, the Travelodge hotel chain is realising the potential of the humble steel box, building what it is calling "the world's first recyclable Travelodge".

The hotel, which is under construction at Uxbridge, in the city's

west, consists of 86 steel modules stacked on top of each other and bolted together.

When completed it will look and feel no different to the budget chains of other hotels, Travelodge says. But it is cheaper and quicker to construct, and, importantly, it can be recycled - its rooms simply picked up and plonked somewhere else.

"It's Lego for grown ups. It really

is that simple," says Paul Rollett, the commercial director of Verbus Systems, an English company that specialises in this form of modular construction.

He doesn't like to refer to shipping containers.

"We prefer them to be called steel-frame volumetric buildings, or cellular volumetric buildings."

Rollett concedes that the boxes are

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based on the same technology as shipping containers, although the ones Verbus Systems use have never held cargo.

"It's a module similar to a shipping container that can be carried around the world on ships in a high volume in an automated way," he explains.

The Uxbridge building was put together in nine days. If it had been built using traditional construction it would have taken nine months.

The structure goes up so quickly because it is mostly built off-site. The modules are manufactured in China, where they are kitted out with bathrooms, plasterboard walls and electrical points. This method of construction is not only cheap, it is also much safer than on-site building, Rollett says.

"There's effectively no risk," he says. "It's high volume repetitive manufacturing. When you make things in a factory you have quality control and repeatability. So you have better quality."

"When you do things on a construction site in the rain, or whatever, things get delayed and you have more human error."

Shipping containers are particularly beloved of environmentalists and all haters of waste. Apart from being easily recyclable, they are fitted out with an eye to sustainability.

The floors and ceilings of the Verbus Systems modules are lined with 25-millilitre thick Australian eucalyptus plywood. (Gum trees are an easily renewable resource as they grow to maturity in about 15 years.) The modules are also airtight and when properly insulated, very snug, so they need minimal heating.

"You could pretty much heat the rooms with a light bulb," Rollett says.

The rooms at the Uxbridge hotel will have a very small electric heater with about the same energy output as a kettle.

The company has begun another modular hotel development at



Heathrow airport, scheduled to be finished in December, which will be entirely carbon neutral. It will be heated through innovative ground-source heat pumps – a Chinese-made technology that uses water pumped 30 metres deep into the ground, where the thermal temperature is about 50 degrees.

The Travelodge development will bring modular accommodation to the commuters and budget-conscious families of middle-England, but it is not the first time it has been tried in Britain.

In 1998, a company called Urban Space Management, which specialises in urban regeneration projects, won a government contract to convert Trinity Buoy Wharf, in London's Docklands area, into a centre for the arts and creative enterprises.

The company's managing director, an architect named Eric Reynolds, decided he would use old shipping containers to create the offices, rental accommodation and theatre and film spaces the site demanded.

"We particularly needed cheap rental housing for the artists we wanted to have on site," says Sarah Hewson, a spokeswoman for Urban



Communal feel ... Keetwonen has spaces for residents to mingle.



Bright box ... complete with balconies, container accommodation near the heart of Amsterdam provides comfortable quarters for its student tenants.

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Space Management, who works out of a shipping container office. The container structure cost less than half of a conventional building.

"We looked at different types of modular housing and tents and stuff. Containers seemed like the best solution. It's no different to being in a regular building. But in terms of sustainability and energy costs, it's better."

Unlike the Travelodge/Verbus Systems model, Urban Space Management uses actual shipping containers that were languishing on wharves until being rescued.

"In the UK we import a lot more than we export, so there is a huge surplus of shipping containers from China, just sitting around, redundant."

Despite not being designed with accommodation in mind, the shipping containers are just as flexible as other modules.

"We use the whole structure," Hewson says. "In some cases we use the doors to create balconies. You can put them together and take out interior walls. The only thing that

governs construction is they are generally eight foot tall [2.4 metres] and 40 foot or 20 foot long."

Since the first container-unit development at Trinity Buoy Wharf (called, somewhat unimaginatively, **Container City 1**), the firm has created 28 other developments around Britain using the humble steel boxes. Word has gotten out, and they now have a waiting list of people wanting to rent shipping container units as homes.

"We get around 500 inquiries a month," Hewson estimates. "There is a huge demand, it's just a matter of finding sites."

Hewson says the container city developments are about a third cheaper than a "regular build". The speedy construction methods mean development financiers don't have to wait as long until they start getting a return on their investment – all of which adds up to more affordable housing, which is a very rare and precious thing in big cities such as London, which has a large working population that needs to be near the city centre.