

# Timeless responsive environment

► Richards Partington Architects exclusively reveals SUSTAINer – the sustainable roadside retail development solution



Revealed exclusively in this issue of **sustain'**, Richards Partington Architects' is delivering for developer Develica, SUSTAINer – billed as the ultimate eco-centric roadside retail environment. The SUSTAINer environment is created around a modern system of prefabricated units. The system is developed from a kit of parts based on the module and volume of a recycled shipping container, providing a flexible building solution, creating a variety of retail sizes and configurations, organised around a sheltered social space.

Richards Partington Architects' Keith Carver, headed up the team working on the SUSTAINer project. "The use of recycled shipping containers isn't new," Carver explains. "Architects and designers have been working with and developing the concept as far back as 2000. Working with redundant shipping units provides an innovative, affordable

and readily available modular construction system. The key to SUSTAINer's success would be the variety achieved using a singular unit. It provided us with a great opportunity to investigate ideas of sustainability and flexibility in a broader context. Using a standard kit of parts, we wanted to explore the social context of roadside retail communities, attempting to create a 'sense of place' in this often unforaging environment."

## ROBUST MATERIALS AND SUSTAINABLE SYSTEMS

SUSTAINer's modular construction allows for additional elements to be added, removed or recycled, based on a tenant's changing requirements. With robust materials and sustainable systems, developments can maintain low running costs and have a minimal environmental impact on a site and its surroundings. The SUSTAINer scheme was developed with four standardised units and green modules, which could be combined in a variety of ways to generate a number of retail solutions.

A series of configurations demonstrate SUSTAINer's flexibility. In the most basic version, the kitchen unit operates on its own. Larger versions incorporate serveries, enclosed seating areas and toilets. Glazed connections between each module provide further flexibility, expanding to accommodate the social and tenant requirements.

## FLEXIBILITY AND INDIVIDUALITY

Spaces between units create inviting social centres that can open out to a covered external courtyard. Here people can meet and relax during a journey. More units can add to this social hub creating small retail communities along the roadside. When required, sustainable modules and additional toilets can be clipped onto these developments to

provide additional support.

Each module can be clad internally and externally with materials that suit the surroundings and occupiers' specification. This provides flexibility and individuality within a kit of prefabricated parts.

## A RECOGNISABLE BEACON

As an identity or brand changes or a tenant moves locations, the cladding can be demounted, recycled and replaced, creating a timeless responsive environment.

Whenever possible, recycled and renewable materials will be used for cladding each unit. Large screens provide visual and acoustic protection from the harsh vehicular surroundings. Together with the units' configuration, they create an external sheltered environment for people to enjoy a cup of tea or bite to eat.

Situated parallel to the roadside, these screens double as an advertisement, a recognisable beacon on your journey. Like the cladding, these screens provide flexibility, easily changeable with identity and branding.

The retail units are constructed entirely off site and craned into position. Prefabrication allows for a higher quality of finish and quicker construction times. The only site preparations required are underground services and utility connections. The units are linked together on site with glazed connections bringing natural light into serving and seating areas □

For further info visit: [www.rparchitects.co.uk](http://www.rparchitects.co.uk) or contact Keith Carver e: [keith@rparchitects.co.uk](mailto:keith@rparchitects.co.uk) For further information on prefabrication and modular methods of construction, readers are advised to check out **OSC magazine** – free with every issue of **sustain'** or visit [www.oscmagazine.com](http://www.oscmagazine.com)

## The Green Room

Much of the SUSTAINer solution was inspired by Richards Partington Architects' Green Room, designed in 2002 and offering sustainable living/working to the consumer in a realistic and accessible package. Combining contemporary architectural design with the very latest in green building technologies, the Green Room is a modular, flexible garden space.

A prefabricated pavilion designed around a strong environmental agenda, the Green Room has limited impact on its site and surroundings, with the structure touching the ground at only six points and being constructed entirely from FSC-certified sustainable timbers. That said, the aim would be to maximise the amount of temperate European timbers, as these generally have a lower environmental impact than tropical imports.

For under £35,000 the Green Room would be primarily constructed off site and craned into position. A planted sedum roof has been specified to further blend the Green Room into the surrounding garden and to minimise the amount of rainwater run off. Other environmental systems, such as grey water recycling, photovoltaic and solar thermal heating, have been investigated and can be incorporated when needed.

## About TEUs

Almost everything we touch, from door handles, cutlery and furniture to bicycles and television sets, has at some point seen the inside of a shipping container. This means that millions of containers are needed in the world and there are as many facts and figures to match. Here are just some:

- The equivalent of about 141M loaded 20ft containers moved across the oceans in 2007 (*Drewery Shipping Consultants Ltd*);
- Many container ships can comfortably carry over 8,000 containers;
- Container capacity is measured in 20ft equivalent units (TEU). This is the size of the standard 20ft-long container;
- Another key size is the 40ft container (ie: two TEUs), 40ft equivalent unit (FEU) and can be loaded with about 30t of cargo;
- Shipping containers come in a variety of types that include 'end opening', 'side opening', 'half heights', 'open top', 'flatrack', 'refrigerated', 'liquid bulk' and 'modular';
- An empty TEU container weights approximately two tonnes;
- Between 1982 and 2005, containerised cargo trade grew three-and-a-half times as fast as world GDP and 40 per cent faster than international trade overall;
- World container traffic in 2007 was estimated at just over 141M TEUs.

For further facts and figures: [www.shipsandboxes.com](http://www.shipsandboxes.com)