

BLUEPRINT

SILVER LINING

WHY 600 BAGS OF CRISPS MAKE THE PERFECT SHELTER

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Above, Woolley's design for the framework of the tent made use of discarded plumbers' scraps. Main picture, the crisp tent with its shiny side on the outside reflects the sun

GOLDEN WONDER

Industrial designer Jack Woolley created a temporary shelter with a difference – each tent is made of 600 crisp packets. **Henrietta Thompson** finds out more

Every now and then an idea comes along that solves several problems all at once. This is the very best kind of idea, obviously, and, as when a mathematician hits on a perfect formula, there's something uplifting about its symmetry.

It's not quite perfect, admittedly, and there's a little way to go before it gets to that stage, but Jack Woolley's latest project is possibly one of these ideas. Woolley, a London-based industrial designer, has made a tent out of old crisp packets. On the one hand that doesn't sound very exciting. On the other it sounds like a one-off publicity-generating stunt of photogenic eco-indulgence. But perhaps it could in fact be a great leap of innovation. If realised, it could also have great potential to be a valuable commercial proposition. Certainly Woolley presents a convincing argument.

The designer's previous work includes projects as diverse as a prosthetic leg for King's College Hospital, a tide-powered oyster machine (awarded Millennium Product status in 1999), modular bathroom furniture for Tretzo, and bone china lighting for Alva. The crisp tent, however, is a self-initiated project, and one he embarked on purely as 'an awareness exercise'.

Inspiration struck one day when out walking. Woolley was thinking about the lightweight temporary shelter developed by Shigeru Ban for Rwanda's refugees in 1994. It dispensed with the need for the aluminium tent poles sent by the UN, in which there developed a black market, and helped to alleviate the deforestation caused by people cutting down trees to make shelters. 'I was very interested in the idea of something that was fit for purpose, but had no value to anyone outside that purpose,' he says.

The other thought that occurred during his walk was the amount of litter on the streets. 'Especially,' he remembers, 'crisp packets. They are everywhere. They are made from this specially developed, very sophisticated laminate of polypropylene and foil which keep crisps fresh by making the packet impermeable to air. But it's also very difficult to separate and so it can't be recycled easily. Crisp packets are incinerated, or – very often – they end up as litter.' The material is also slow to degrade, meaning once they do end up as litter, crisp packets remain on the streets for a long time. 'So here's this amazing material that is not only not being used,' reasons Woolley, 'but is also causing a problem.'

Taking a wheelbarrow on a walk around King's Cross, Woolley collected 600 carelessly discarded packets. He took them home, split them open, cleaned them, and set about experimenting with ways to join them into larger, more useful sheets. Woolley tried stitching, gluing and heat welding the packets together. The final method produced the strongest seam, so he welded the 600 packets into a sheet 6m x 3m, a patchwork of logos and synthetic flavour ideas on one side, a high-quality reflective surface on the other. This combination of reflective



Main picture, the crisp tent is lightweight, compactable and can be reversed according to the climate. Below left and bottom, the 600 packets are heat-welded to form a sheet measuring 6m x 3m



THE PROTOTYPE, WITH ITS 600 PACKETS, COULD BE ADAPTED TO A NUMBER OF DIFFERENT SIZES, BUT THAT FIGURE REPRESENTS ONE YEAR'S CRISP CONSUMPTION BY A SINGLE SCHOOL-AGE CHILD



surface and impermeable membrane makes the material especially well suited to producing lightweight waterproof structures, he says.

The sheet can be reversed depending on the climate: shiny side in to insulate during cold weather; shiny side out in hot, to reflect the sun. Besides that, the crisp tent is very light, and very compactable – anyone who's been bored with a crisp packet to hand knows how small the material can scrunch up when you want it to.

To support the crisp packet sheet, Woolley wanted to continue the theme and construct a frame from rubbish too. The solution he hit upon was plumbers' scraps – useless lengths of 15mm water pipe, which he swaged and soldered into a random collection of longer poles. These he assembled into a rigid frame using a four-way pin-joint-end-plug which he invented himself in order to accommodate the random corner geometries encountered by the variety of strut lengths.

The prototype, with its 600 packets, could be adapted to a number of different sizes, but according to Woolley that figure represents one year's crisp consumption by a single school-age child. Aside from making smaller versions,

meanwhile, he is also trialling structures that would stand up without the need for the poles at all. 'I'm experimenting heat-welding two layers of the material into little triangular pillows,' he explains. 'These can be inflated and then the shelter can take on almost any geometry, and you don't need a separate frame. It needs work still, but it would be great to be able to scrunch the whole lot into a tiny package.'

Though he's not entirely happy yet with the design, Woolley is looking to develop it further with a crisp manufacturer. 'The shelter would work just as well without it being crisp packets,' he explains, 'but there's such an abundance of this material already just out on the street. To make it work there does need to be some kind of infrastructure to collect crisp packets but that's not difficult.' If Walkers can do it for its Books For Schools campaign, in which some 29,000 schools all over Britain organises mammoth crisp-packet collecting schemes, swapping an average of 17,500 tokens on the packets for new books each year, it can certainly be done. How it fits in with the current anti-obesity campaign is another matter of course, but it's food for thought anyway **B**