

NOT JUST ANY

Eat your heart out Albert Steptoe: architects and clients alike are seeking discarded materials for their buildings, driven by environmental concerns, the recession and the look of it. But it's more than cosmetic: if you want to use recycled stuff in your project you'll have to start thinking differently about design, writes **Eleanor Young**

OLD RUBBISH

WHEN MARTIN PAWLEY wrote *Garbage Housing* in 1975 he thought of using all sorts of consumer waste, from car tyres and body parts, the Heineken World Bottle which stacked as a brick and newsprint cores. But there's an easier way: use waste from the construction industry.

Some of this is very simple, you just need to specify the right thing; recycled steel, PFA in your concrete or ground glass as an aggregate. But at the next level down, mainly small projects with private clients, it gets more direct. Ebay, Salvoweb, builderscrap.com, local skips, your own reject pile and the contractor's other sites are the main sources for this sort of project. At the moment it tends to be driven by ideology, or the idea of saving money on materials – it requires dedication, investigation, thinking on your feet and plenty of design flexibility.

eBay house

Architect Andrew Mulroy started what he calls the eBay house at the insistence of a sustainably-informed client on a tight budget. Mulroy took the north London refurbishment through planning to tender drawings and has been kept on as a consultant. The client hopes to save 25-30% on capital costs by scouring the web and local streets for the right materials.

Mulroy and his team are on call to help with buying decisions as the auction starts to count down. Their 'target response time' is 25 minutes. You have to seize the moment, and the material. The questions include calculating quantities – how many square metres will half a kilo of insulation cover? (On the advice of insurers everything is appropriately caveated.) A back window came from eBay for £75. Quick decision making is often needed for recycled items: it's this size and colour or keep looking.

Searching locally has been rewarding. Similar



DAVID GRANDORGE



houses nearby share dimensions and materials. A rotten window frame was easily replaced from a scrap heap by a large sliding door from a nearby 1930s home – it just needed new glass. Other local finds include roof tiles. Mulroy's client drives round with his own rubbish in a trailer and swaps it for things he fancies in local skips. It is a neat if legally questionable way to avoid skip costs, and garners a lot of material in small quantities. 'It is amazing how much Kingspan insulation you can find in skips,' says Mulroy. Any little gaps are stuffed with it. Timber from the site is reused and hard core kept in the garden for a future planned extension.

Plenty of specification detail is needed when you are having to weigh the options quickly and decide whether a cheap alternative meets the brief. Mulroy has learnt what sort of detail tender drawings must provide for someone sourcing their own, highly variable, materials. Looking back he thinks that instead of giving a product name he might have given more detail on other approved products, dimensions and u-values. 'It means my client can go shopping,'

he explains. 'I'd write a more performance based spec.'

Architects have to be flexible about how they think but so do building control officers. Meeting problems with building control is par for the course with salvage materials. Buying multifoil insulation shouldn't be complicated, but if it is not on the local authority approved list it can't go in. On a previous job Mulroy had this problem with Celco, which had to have an extra 'approved'

layer laid on top before the ceilings were closed up. 'We should have gone down the approved inspectors' route,' he says ruefully.

New way of working

Walking into Manalo & White's London office the language is something between vintage shop and jumble sale. Phenolic ply and auctioned table legs of various shapes make the work bench, tea is served in floral tea cups and there is a mixture of wooden kitchen chairs. Much of Manalo & White's work has been slick high-end houses, floating acrylic, entrance waterfalls, endless upgrades. But a Suffolk extension, a canal cruising club and Seabank, a holiday home in north Norfolk for the family of architecture writer and academic Jeremy Till, have given the practice some projects more in tune with their thinking.

Till wanted a place that wasn't too 'architecty' and didn't want to be involved in every little decision. Reusing as much as possible from the existing building seemed a good way to work. 'It needed a lot of tolerance,' says Brian

OPPOSITE: Reused floorboards at Manalo & White's Seabank House.
BELOW: Piles of reclaimed material waiting to be used at King's Cross.



JOHN STURROCK

Greathead, 'Both physical and dimensional. You couldn't impose your will.' Control also had to be ceded on price, as guessing the cost of fitting is fraught with problems – how long will denailing take for example? And then, if you miss a few nails, you lose a saw blade or two.

One of the biggest resources was the waste from the tumbledown cottage. 'We developed a process,' says Greathead. 'We had a garden full of stuff, whenever we needed something we'd wander round and pick up stuff.' Old doors were rehung, and where they were too short a piece of wood was added to the top. And enough Norfolk pavement tiles were rescued to roughly line the stove enclosure (nowhere near the flat surface Manalo & White's drawings had shown).

'You have to talk to those on site and trust them. There is increased collaboration and a quite different authorship to the building,' says Greathead. He realised that the builders had really bought into the idea when he found one of them screwing a handle they carved from a floorboard into the larder door. It sometimes required a leap of faith. A call from the builder suggesting old floorboards were used with rust marks visible on the doors rather than black side out put Greathead on the spot. A decision was needed quickly but he was miles away and mobile reception didn't allow for sending of a photo. Greathead went with the builder's recommendation ('it looks like a leopard'). It also brought extra responsibility for the builders: the search for a basin seemed to have ended when one was discovered under a piece of plastic in the garden, its ceramic upstand making it just perfect. So when one of the builders dropped and smashed it he offered to look round reclaim yards for a replacement.

For small jobs scraps and leftovers can be like gold dust, but in a supplier's yard they are often

overlooked. Greathead wanted glazed bricks for the bathroom, but for rounded edges on the shower and the edge of the bath that meant expensive made-to-order bull nosed bricks. Manalo & White phoned around brick yards in search of leftovers, pleading with people to go and check what they had. The 40 matching burgundy he finally found weren't really the colour he wanted, but they were cheap and the bull nosed were the same price as the glazed brick – and have become a much loved feature.

On a house extension in Walberswick Greathead and the client agreed to clad it in a local vernacular, wainey-edged elm weatherboarding. But instead of slim boards the local timber supplier offered an unwanted run of very wide timber. 'It was very butch, like elephant skin,' says Greathead. It took a whole new language of chunkier detailing to fix it and ensure the flashings projected out over it. Inside old groins were cut up for stair and landing with rope from Salvoweb as handrail and balustrade improvised by the builder (a mini Stonehenge of offcuts). 'It is not always to my taste,' admits Greathead. 'But they like it.'

'You have to talk to those on site and trust them. There is increased collaboration and a quite different authorship to the building'

St Pancras cruising club has commissioned Manalo & White to design it a new clubhouse near London's King's Cross. It could be the perfect client for public recycled building. 'They have a miniscule budget, tolerance for a rough aesthetic and are on the edge of the largest building site in Europe,' says Greathead enthusiastically. He has been to inspect the old sheds of salvaged material on the King's Cross Central site. There are bags and bags of materials saved under the station's planning obligations. Looking at them has started to suggest an aesthetic. There are fire bucket holders, thousands of granite setts and cast iron columns, all reusable. Each comes with its drawbacks, the columns would need testing and setts are expensive to lay – but Greathead thinks the club members might take this on.

With 50 buildings planned for King's Cross Central there are plenty of potential homes for the reclaimed material. Structures nearing completion at the moment include Stanton Williams' building for Central Saint Martin's College of Art and Design and the Western Transit Shed, which have been repaired using bricks removed from elsewhere. Extra timber flooring has been used as cover panels above the glazed windows at each level within the atrium of the Granary building and horse troughs, cobbles, capstans and historic turntables will be placed across the public realm.

Budgetary constraints, planning obligations, landfill taxes, the Waste Resources Action Programme (Wrap) and a little lateral thinking are applying elements of this salvage approach to larger buildings, though less visibly. AHMM's Angel building in north London for Derwent London reused the existing concrete frame while Henley Halebrown Rorrison built its Goole arts centre on existing foundations. At Sandal Magna Primary School in Wakefield demolished bricks from the old school became gabion fill in Sarah Wigglesworth's design.

Of course trying to patch together materials from many sources runs the risk of creating a visual hotpotch. But they can bring a richer, deeper palette that speaks of time, decay and a certain wabi sabi modesty. Certainly for architects who are tired of replacing one kitchen unit with more up to date one, and stone floor with stone floor, it can ameliorate the sense of endless, depressing consumption. ■