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ENVELOPE

27.07.2007
Innovations in cladding

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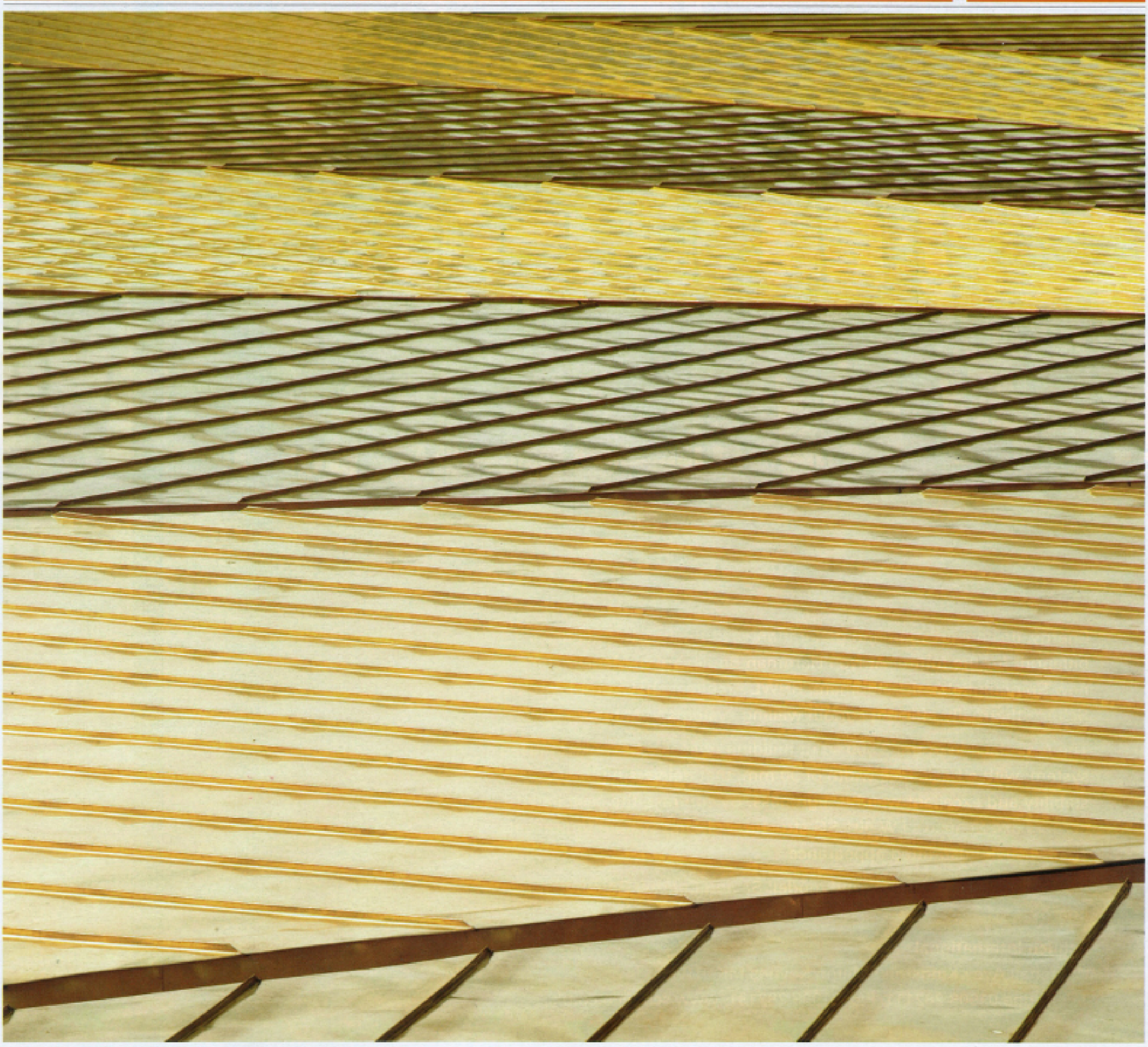


Viñoly's golden touch

The sleek metal facade of Firstsite's Colchester arts centre is adding a bit of bling to the ancient landscape

DSDHA

Setting the Thames on fire

The charred wood cladding of DSDHA's kiosk by the Thames in London stands out from the corporate developments around it and acts as a pointer to the area's past. **Will Jones** finds out how it came about

Photos by Morley von Sternberg

PREPARING THE CHARRED SAMPLE

BLOW TORCH During initial testing timber was charred with a blowtorch, but a furnace was used for the final job.

WATERBLASTING With the timber suitably charred, a high-pressure water jet was used to dislodge debris.

FINISHED SURFACE After further drying with a blowtorch, the plank shows off the grain and imperfections.

Specialist joinery contractor Martin Childs (MCL) undertook the unenviable task of charring the timber for Parkside Kiosk. Close collaboration with architect DSDHA, welding goggles and big gloves set them on their way.

There are four main stages involved in creating the charred finish for the cladding, starting with the most exciting bit, charring. During testing a blowtorch was used but MCL set up an automated furnace with gas burners to char the 500sq m of timber required for the whole job.

"We passed the timber through while watching it constantly," says David Coates of MCL. "Some of the planks actually catch fire, so as it comes out the next step is to brush off any burning debris and embers."

The burnt timber shrinks by 1-3mm in width due to the rapid heating, and some wastage also occurs due to twisting.

When the timber is suitably charred it is subjected to a high-pressure water jet to blow away any dusty debris, before being reheated with the blowtorch to dry it quickly and thoroughly. The result is a finished plank of deep-brown matt hues with raised black grain running through it.

Imperfections such as knots only add to the textural quality of the panel, providing a constantly varied natural aesthetic.

"I wasn't sure about the process when we started, and it has produced more wastage than we'd normally want," says Coates, "but now that it is being installed on site, the timber looks really good. I'm impressed."

is strong, and once charred, wood will not burn again. Also, if heated, wood has greater resistance to rot and insect infestation.

"We're using Thermawood, a baked pine which has the shelf life of hardwood because of this heat treatment, on another project," says Saunt.

Once the desired level of charring had been established, the team had to work out how to finish the timber. "We looked at sealing the char but it seemed silly to put a treatment on a self-protecting product," says Saunt. "We couldn't leave it as it is because of the debris that could come off, so we waterblasted and then abraded it, and that produced the appropriate level of charring, combined with limited debris on the surface. That is what we specified in the tender."

Carbon is strong, and once charred, wood will not burn again. Also, if heated, wood has greater resistance to rot and insects

Saunt had seen burnt furniture pieces before, by artist Jim Partridge, but she never dreamed that someone else was creating burnt envelope cladding. However, it seems the Japanese have been doing it for years. "We had literally just finished testing and were due on site when I went to the 2006 Venice Biennale and saw Terunobu Fujimori's Japanese Pavilion. You enter it through a charred timber screen. Inside there were a number of projects that use charred timber and information about the process of Yakisugi. Neither I nor Trada had ever heard of it but you can buy charred cladding in Japanese DIY stores."

The 19mm-thick by 94mm wide charred cladding of Parkside Kiosk is formed into panels and secret-fixed to the battens and joist set in the kiosk's steel frame. A large canopy cantilevers out 9m, providing shelter, while internally much of the space is free of columns to allow the cherrypicker to fit in. An irregular, stalactite-like column is built out of 94 by 94mm-thick timber pieces, as is the underside of the graduated canopy ceiling. All is charred black, yet the kiosk sits lightly in the park.

"We wanted to minimise the visual disruption, we didn't want to make a barrier between the people using the park and the financial and tourist audience of More London, so we carved the kiosk up by using lots of glazing to provide views through," says Saunt.

The resulting building is like no other, and that is not something easily achieved in today's quick-fire, attention-grabbing architectural landscape. It is a delicate juxtaposition between extraordinary design and a rationalised, subtle narrative informed entirely by its surroundings.

"It will be really interesting to see how it weathers," says Saunt. "I'm pleased we haven't resorted to using chemical preservatives, and we've talked to the client about possibly recharring it in the future. They've been fantastic so far and are optimistic, but understandably nervous, about setting fire to a building that stands next to City Hall."

A white sister kiosk marks the Blossom Square entrance to the site, seen here from the Thames with Tower Bridge to the left.

PHOTO: DSDHA

PROJECT TEAM **Architect** DSDHA, **Client** More London Development, **Structural engineer** Jane Wernick Associates, **Services engineer** Arup, **Main contractor** Alandale Logistics, **Original contractor** MICE Sames, **Timber weatherboard cladding** Martin Childs, **External works** McNicholas, **Mechanical** Derham Ball Contracts

The building's blackened rough exterior is tactile and inviting.

Parkside Kiosk model showing the 9m cantilevered canopy and its stalactite-like timber column.

"It's every architect's fantasy to set fire to their own building, isn't it?" states Deborah Saunt, co-director of DSDHA, the practice responsible for the "charred" pavilion outside City Hall on the south bank of the Thames.

The structure, named Parkside Kiosk, will house a café, public toilets, ATM machines and a parking garage for the giant cherrypicker used to clean the windows of City Hall. It sits at one end of the strip of landscaped ground between mayor Ken Livingstone's abode and Tower Bridge, while a sister kiosk in stark white marks the other entrance to the park from Tower Bridge Road. But contrary to its mundane uses, the charred darker sibling looks like some bizarre geological formation or a petrified Neanderthal dwelling. The rough, dark exterior is immediately tactile and inviting, yet similarly rugged and mysterious.

This is blackened, burnt architecture. But it's not an anarchic two fingers to the establishment, more a reaction to the past and history of the site.

"The notion of burning came about the first time we visited the site," recalls Saunt. "The taxi driver, Roy, dropped us off on Tooley Street, and as we left he said: 'I used to play here on the bomb sites!'"

"This history, this important emotion of the site, seems to have been forgotten, papered over by the new developments. We wanted to recapture the emotional resonance of the area that has become very corporate and slick — it isn't part of the real Bermondsey, it doesn't reference itself very well with the past."

'The notion of burning came on the first visit. The taxi driver said: "I used to play here on the bomb sites."'

High in the mind of the architect was also the position of the kiosk and the need to negotiate between the steel, glass and limestone of the corporate More London site and the less structured surroundings of the residents' park which lies behind City Hall.

"In terms of the architectural language we tried to find a materiality and form that bridged between the ossified world of More London and the natural world of the park, says Saunt. "We decided that timber was the obvious choice as it's used often for park buildings, and we could manipulate it to make it look like it had been turned to stone."

But how to burn or char a 36m-long by 9m-wide by 5m-high building that stands next to the mayor of London's office? It's not like you can simply set it on fire and then stand around with buckets of water at the ready for when it's "done".

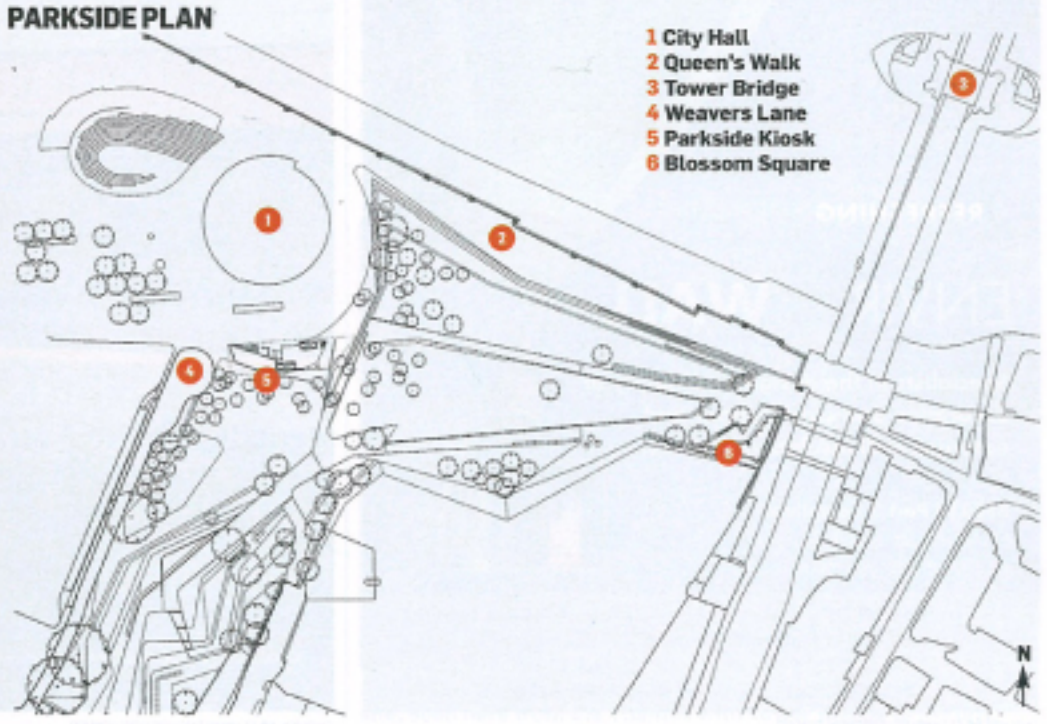
DSDHA tested timber samples to see how they burnt. Armed with a blowtorch, the architect scorched oak and cedar. The first took too long to burn, and fire had no pronounced effect on the latter. Siberian larch, however, which is known for its tough grain, got the thumbs-up: a timber that stands up to burning but which yields enough to the flames, its grain standing proud while the surrounding softer fibres shrink away.

DSDHA then worked with timber research association Trada to develop a methodology of how to produce large amounts of burnt timber. "We needed to know how to write a specification for the contractor to char timber," says Saunt. "It was all very well us doing the testing, but we had to instruct a team to do it and we were worried about potential risks."

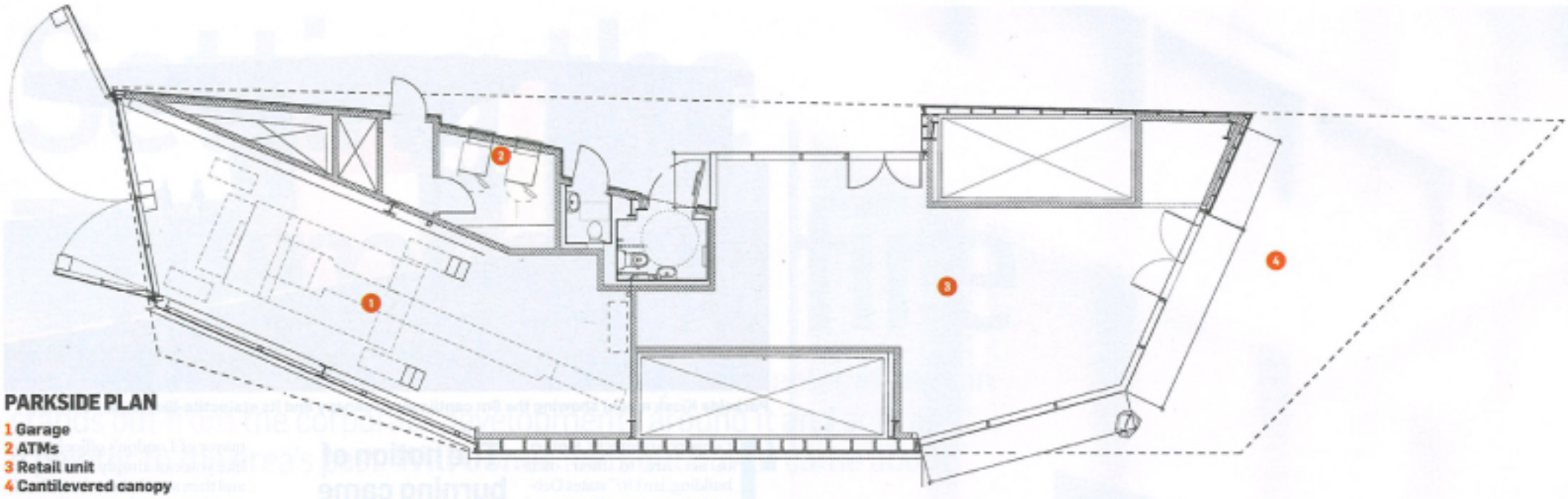
The more research that DSDHA did, the more confident it became that it had hit upon a good idea. The architect discovered burnt wood is very resilient. Carbon ▶

The pieces of charred cladding are formed into panels which are fixed to the battens and joists of Parkside Kiosk's steel frame.

PARKSIDE PLAN



DSDHA



PARKSIDE PLAN

1 Garage
2 ATMs
3 Retail unit
4 Cantilevered canopy

The small scale and transparency of the kiosk stands in contrast to the surrounding large-scale 'corporate and slick' buildings.