



# Wooden roof, London

Tsuruta Architects' counter-intuitive extension whisks rain back towards the house to leave clear views of the sky above

Words: Jan-Carlos Kucharek Photographs: Ståle Eriksen

In a literal example of 'thinking outside the box', it was the view down over the original lower ground extension that inspired Tsuruta Architects' view out of its new design. Appointed by a lawyer couple to trouble-shoot a leaking glass and steel back extension to their grade II listed home in an Islington conservation area, the firm's design was driven mainly by the shortcomings of the original.

From the raised ground floor formal reception area looking over the garden, the filthy state of the prominent glass roof below suggested water ponding from bad drainage was causing the internal damp problems. With a large,

mature garden beyond the roof line, the architect convinced the client that a sympathetic rebuild in timber was preferable to a patch-up of the existing extension. The result is a delicate but deep diagrid box of only 19m<sup>2</sup>, whose roof deals with the drainage problem and takes account of a part-westerly aspect – the solution being the formal essence of the new project.

With the height of the adjacent boundary wall already dictating the maximum height of the roof in section, Tsuruta went with the flow and followed its angular run in plan too, creating a timber diagrid below a glass roof of 23 triangular, double-glazed panels, their

sectional zig-zagging creating the cumulative falls to deal with the flow rates that the previous shallow mono-pitch couldn't. In what looks like a counter-intuitive approach, the firm ran the falls back to the main building so that the roof now drains to a rear gutter installed between the new structure's perimeter beam and the face of the original wall, or off to the side. These perimeter gutters covertly channel water to the two drain points of the former extension, mingling discretion with practicality.

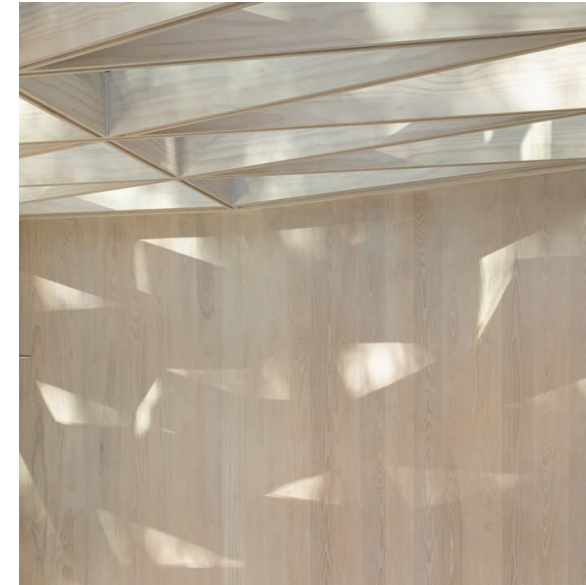
The firm had worked with Accoya timber on a couple of previous projects and had been impressed with the product's dimensional



**Left** Not only the garden but the sky. The new intervention has created a space that extends both out and up.

**Top** Both extension and courtyard were dictated by the extreme angle of the home's boundary wall.

**Above** Black-charred Accoya on the outside counterpoints the milled faces of the material internally.



**Above** Over the course of the afternoon, complex shadows cast by the roof begin to play across the ash walls.

**Left** No mechanical fixings or glue were used at the diagrid roof interfaces.

stability and low thermal conductivity, so used it here fully as structure and cladding. Modelled in 3D and then CNC fabricated, the roof's Accoya elements were assembled on site in small pieces using traditional carpentry methods, which enabled the diagrid cross-structure to interface without the need for glue or mechanical fixings. A 2mm thick ribbon of stainless steel ties the whole together, allowing the glazed panels' structural silicon interfaces to bond to this rather than the top face of the timber.

For the elevations, a shou-sugi ban charred Accoya exterior is offset by the simple, milled inner faces of the Accoya perimeter ring beam,

white-washed to reduce the timber's green/grey hue and treated with a permeable Osmo oil finish. Read alongside fine internal European Ash panel joinery, the whole creates a volume that is formally simple but conceptually rich.

This richness rewards the observer too. Mitigating the long, warm rays of west light helped generate the depth of the diagrid beams, which, come the afternoon, now create a mesh of complex shadows that play across the internal lining of the extension. For the Japanese Taro Tsuruta, the project was always going to be as much about darkness as it was about light.

Yet achieving that conceptual strength has

not been at the expense of practical benefits.

From the garden the extension is now clear of gutters and downpipes, and from that all-important formal upper reception window, from which Tsuruta first considered the project, a roof no longer slides apologetically away but offers up its compelling configuration boldly to the viewer to reveal the more informal yet strikingly minimal social space below. And from down there beneath the glass, freed from its incarcerating dirt and detritus, there is now the sky. 'And if you're going to have a glass roof,' remarks Tsuruta, as if needing to state the obvious, 'it's always better to see the sky'. ●