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PROJECT ORANGE VERSUS HOPKINS

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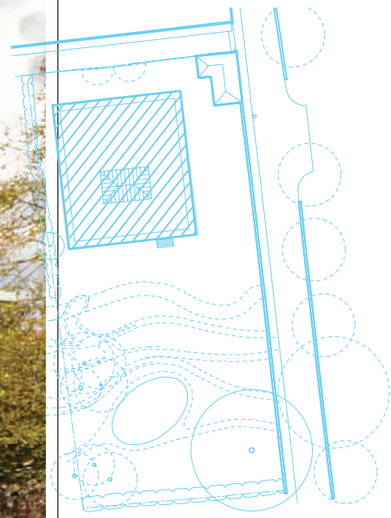
Crystal clear

Project Orange director *James Soane* describes how his practice reconfigured a 1970s house originally designed by Michael and Patty Hopkins. Photography by *Jack Hobhouse*



Crystal Palace is a great name for a house, although it was not always called that. The Tracey House, in Bury St Edmunds, Suffolk, was designed by Michael and Patty Hopkins in 1976-7, shortly after they completed their own house in Downshire Hill, Hampstead. The concept was for a glass pavilion with a Roman villa plan, the accommodation surrounding a central atrium. They say that after the steel frame was erected, it became clear that their client, an electrical engineer, wasn't going to continue the construction of the enclosure and the finishing of the house to their details. The house is not, therefore, recorded as a 'Hopkins Architects' building.

The house was sold in 1981 and modifications undertaken, including enclosing the open courtyard and adding a master bedroom extension. It remained in the same ownership until ▸

2012 when it was sold to the current owners. Project Orange was invited to develop a strategy for refurbishing the structure. The challenge was to maintain the integrity of the house while upgrading it to meet a new brief 34 years after it was built.

The house was conceived as a lightweight steel and glass pavilion, perched in the landscape. The original 300m² plan created a series of interconnecting rooms around a glazed atrium, suggesting a collective and flexible way of living. But the atrium's glazed roof was constructed as a crude off-the-shelf solution, which was not carefully enough detailed to counteract ventilation and heat-gain problems.

We began by looking at three possible strategies. The first was to restore the building to near enough its original layout, with one caveat – the client was not prepared to lose the master bedroom extension. This would have created a largely open-plan space, an open courtyard, and two bedrooms. The second option was to create a glazed link across the courtyard dividing it in two, allowing more autonomous rooms to either side. Our third scheme kept the glazed roof, adding horizontal louvres to help manage the solar gain. Additional vents were also added at floor level.

We created a 'doughnut' of living space with the conservatory at the centre

After reviewing this with our client, we all agreed that the glass roof had to stay because replacing it had huge cost implications. However, we also felt we could take it one step further by reducing the size of the bedrooms and bathrooms to create a 'doughnut' of living space with the conservatory at the centre. A library wall was built that separates the service spaces from the main living space, while the kitchen and TV area are created from freestanding joinery.

The client was also keen to install underfloor heating powered by a heat pump system along with solar panels on the roof. While calculations showed this was hard to justify, mainly because the house's U-values are so far from current regulations, we decided to pursue this strategy with the back-up of a boiler that could be used in the middle of winter to power the heating if need be. It was something of a revelation when the carpeted floor was removed to reveal the original heating system – more like a hosepipe wiggling through timber joists, with holes in the sub-floor filled with tennis balls.

We made an assessment of the windows, an early form of sliding double-glazed door, and took the view that most of them were still in tact, but that the rubber seals needed replacing. The exterior canopy was suffering from corrosion, and we had to replace the brackets. Finally we had to deal with the 'difficult' detail – the timber facing to some of the steel verticals – and what to do about the panels above the glazing that were failing. After a great deal of consideration we decided to apply powder-coated white metal capping, both to protect the wood and provide visual continuity. Inside, myriad electrical installations were removed, and a simple run of downlights housed in a tray hung from the ceiling. The floors were all replaced with oak wood-block flooring, while a series of painted timber beams provides shade as well as visually blocking the interior view of the skylight.

Overall the project is not a straightforward 'restoration'; rather it is a reconfiguration that we hope respected the original intentions while giving it another 30 years of life.

Opposite Painted timber beams were installed to provide shade beneath the central rooflight
Below All interior floors were replaced with oak wood block flooring
Previous page View to south elevation

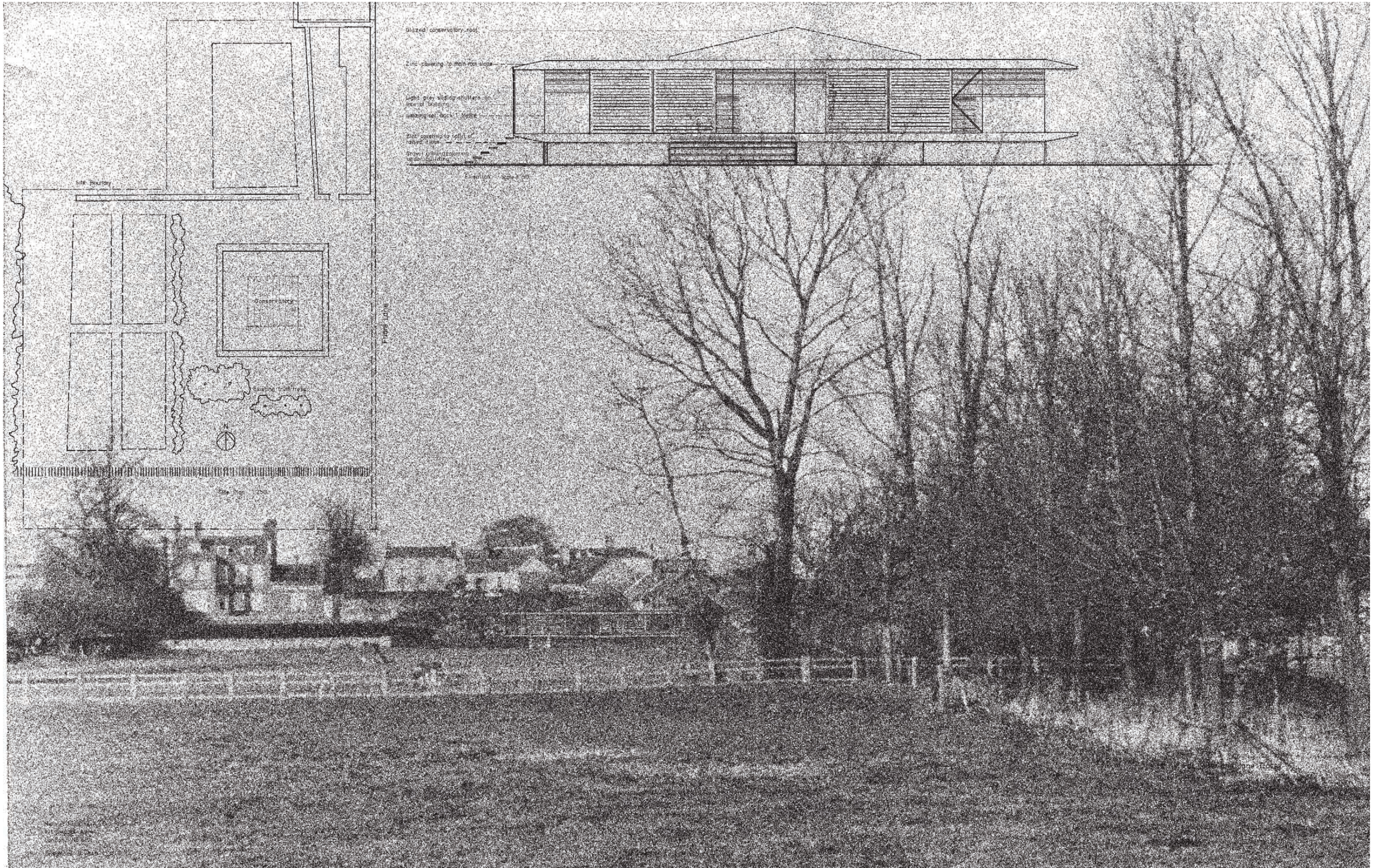
POSTSCRIPT

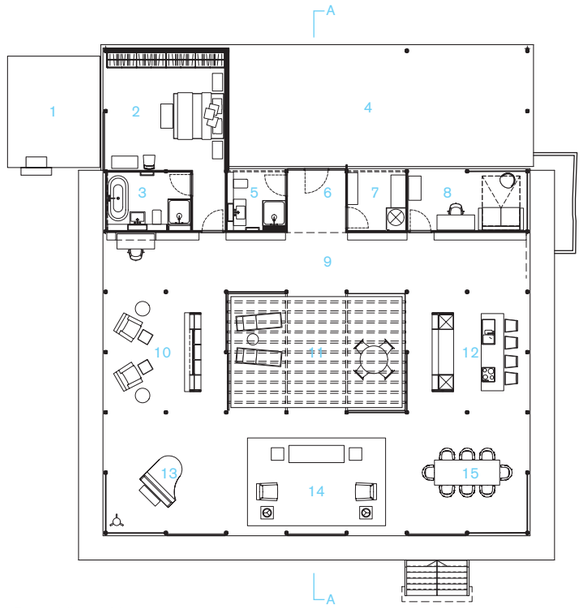
When I went with the photographer, Jack Hobhouse, to take pictures of the house on a sunny October afternoon, the low sun penetrated the house, animating it with dramatic shadows. Suddenly black clouds appeared and it poured with rain. Then, just as the sun was setting, the sky cleared and became violet blue. We both knew that we had to get outside to capture the house in the gloaming. The results are magical, harking back to the era of the case study houses; and also rather special because you can't build houses like this anymore. It should probably be listed. ■

James Soane is a director at Project Orange

Project data

START ON SITE September 2013
COMPLETION July 2014
FORM OF CONTRACT Traditional
GROSS INTERNAL FLOOR AREA 267m²
CONSTRUCTION COST £245,000 (excluding VAT)
COST/m² £918 (excluding VAT)
ARCHITECT Project Orange
CLIENT Private
STRUCTURAL ENGINEER
Richard Jackson Engineering Consultants
MAIN CONTRACTOR Elford & Sons
CAD SOFTWARE USED Vectorworks

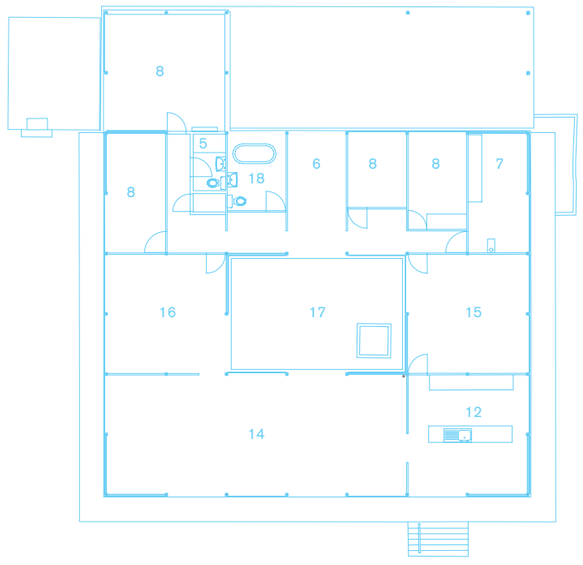

Glazed conservatory roof
Zinc covering to main roof slope
Light grey sliding shutters on
raised floor



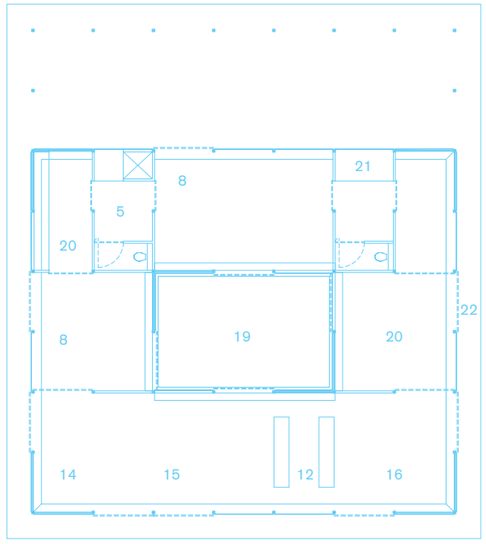
Ground floor - 2014

Previous page
Original drawings and photographs by Hopkins, 1976

1. Master bedroom terrace
2. Master bedroom
3. Master bathroom
4. Carport
5. Shower room
6. Entrance lobby
7. Utility room
8. Bedroom
9. Library
10. Snug
11. Sun room
12. Kitchen
13. Music
14. Living
15. Dining
16. Studio
17. Atrium
18. Bathroom
19. Open court
20. Workshop
21. Boiler
22. Approach

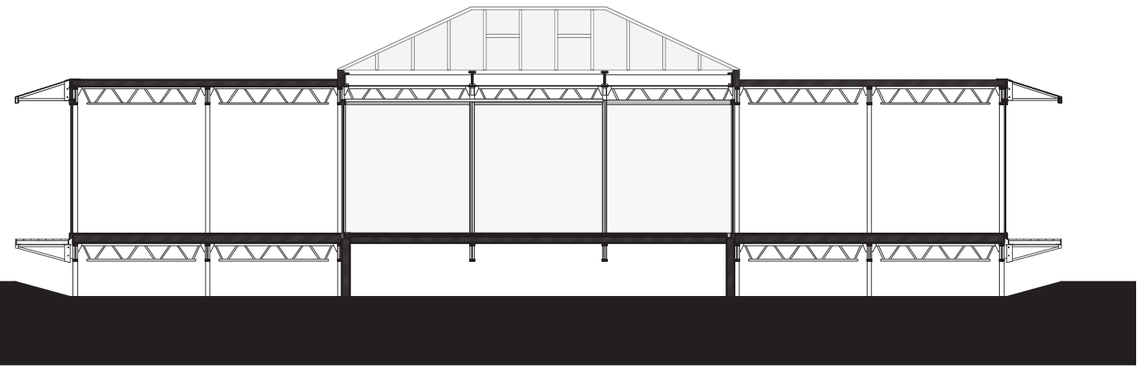


Ground floor - 2012



Ground floor - 1978

0 1m N



Section A-A – 2014

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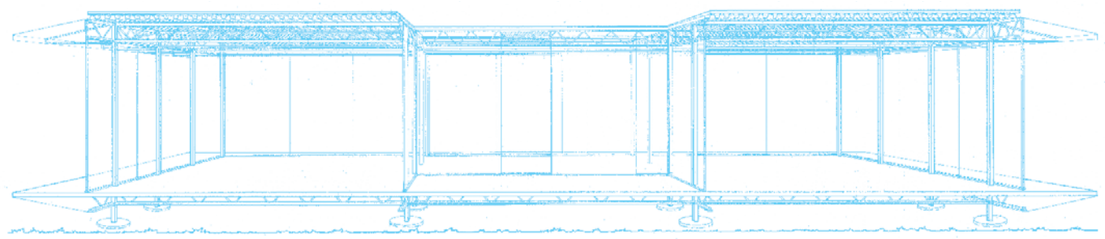
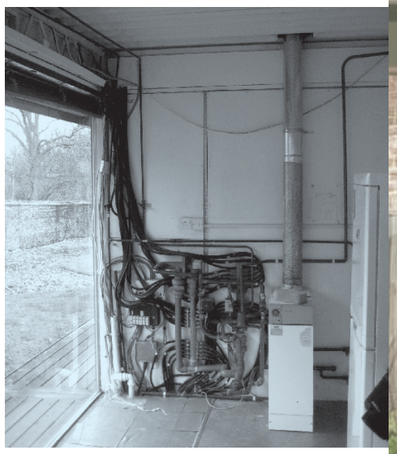


Sectional perspective view – 1978



Clockwise from top left Corrosion damage in the existing building; the atrium in 2012; 'myriad' electrical systems were removed or rationalised; Project Orange wanted to restore Hopkins' original details; the atrium, now restored as a 'snug'; master bedroom **Centre** The enclosed atrium unites the restored house **Opposite** View to main entrance