



## Loop House

Teddington, London

Architect : Unagru Architecture Urbanism

Structural Engineer : Structures Made Easy

Contractor : House Fixers

Photographer : Tim Crocker

Completion Year : 2023

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### Overview

Loop House combines several interventions on an Edwardian detached house. The clients, a family of five with parents in the creative sector and three lively boys, required a space that reflects their joyful, expansive personalities.

The rear extension has been partially rebuilt, insulated, and finished with white tiles, creating wide openings supported by slender columns. The roof has been re-covered with slate tiles, more akin to the original structure, and extended to accommodate two new bedrooms on the upper floor. The extensions are deliberately minimalist, offering a stark contrast to the original building's detailed and colourful façade.

The main transformation on the ground floor is the creation of a central services core containing the stairs and cloakroom, around which a sequence of open spaces flows. These are marked by coloured thresholds and (sometimes) sliding doors, forming a continuous loop of living areas. A previously fragmented, dark, and series of small rooms is now a playful, bright, and spacious sequence of spaces, perfect for a game of tag or hide-and-seek, and providing endless variations for everyday life.

### Design

The original building albeit extended in 1985 was characterised by small and dark spaces with a central corridor. The extension was too shallow to work as a dining area and was fragmented by the original structure, which had a long, dark kitchen inside the outrigger. The ground floor's design draws inspiration from the Krefeld houses by Mies van der Rohe, where large, staggered openings strike a balance between a traditional sense of space (the room) and the openness and asymmetry of modern sensitivity. We combined this typology with the opportunity of a continuous circular layout around a services core. The lived experience is dynamic, with both children and adults moving through the space in an almost filmic manner, continually discovering new ways to interact.

On the upper levels, the layout is thoughtfully arranged to include three bathrooms, five bedrooms, and a utility room, much to the clients' delight.

The choice of spatial typology based on the room also meant a lesser structural intervention: by maintaining the structure of the rooms and avoiding the open plan we could be more understanding of the building's qualities.

We took the same careful approach with the improvements to the house's energy efficiency, aiming to lower the building's lifetime emissions, with a special focus on reducing emissions from the building process. The green roof and projected rain garden will greatly add to the biodiversity of the site.

### Environmental Strategy

Our approach to retrofit aimed at maximising improvements in the building's efficiency while minimising the intervention's carbon footprint. We set out a strategy for the upgrade of the fabric in the early design stages. The areas most affected by the work – the rear extension, ground floor's floor structure and roof, were all insulated and made airtight. All the windows were replaced with double-glazed units. The demolished material was offered to local reclamation yards for re-use and eventually recycled.

### Energy Engine:

The upgrade of the fabric has allowed us to replace the gas combination boiler with an air-source heat pump. Replacing the gas hob with induction has meant removing the gas supply altogether.

### Biodiversity:

The ground floor extension roof was detailed to and will soon become a green roof to further enhance the building's thermal performance and biodiversity.

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