

# Edward Williams Architects completes CLT car park infill housing scheme

[architectsjournal.co.uk/buildings/edward-williams-architects-completes-clt-car-park-infill-housing-scheme](https://architectsjournal.co.uk/buildings/edward-williams-architects-completes-clt-car-park-infill-housing-scheme)

By Fran Williams

October 19, 2022

The project consists of four new buildings placed in the rear former car park of an existing development of 39 homes in Stratford, east London, to create a landscaped, mews-style housing scheme.

The new buildings comprise two L-shaped blocks positioned alongside existing housing to create two courtyards. Together they provide nine new apartments, including four three-bed, three two-bed and two one-bed semi-detached homes.

The site is a Second World War bomb site, with poor ground conditions so a CLT structure was used to yield lighter loads, minimising requirements for piling and foundations. The CLT structure has internal exposed soffits and dry acoustic floor build-ups, allowing thin floor plates to facilitate increased floor-to-ceiling heights within.

Stemming from detailed daylighting studies, the roofs have been designed to incline so that the new buildings don't intrude on existing rights to light.

The scheme is clad with a timber hit-and-miss façade, framed by metal profiles that also mark floor plates and openings to contrast with the brick façades of the existing. Roof slopes are directed north to south to optimise PV energy harvesting.



## Architect's view

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This project represents a new way of infilling residential areas, making them more compact, safe and efficient and regenerating the existing built environment. By re-using under-utilised space, in this case derelict land, it provides new homes and modern facilities for the residents.

In response to the Mayor of London's 'call to arms' for the creation of more small and local developments, this project stands as an exemplar.

Sited in an ex-bomb site, with poor made-up ground, the use of timber structure, allows for lighter footprint loads, minimising piling and foundations. The cross-laminated timber structure, with exposed soffits and dry acoustic floor build-ups, also allowed thin floor plates to make up for increased London Standard internal heights.

The bespoke roof inclination design for each building stems from the daylight/sunlight study, so the new buildings do not intrude in the existing rights. This allowed the designers to maximise the development and create unique homes for this site.

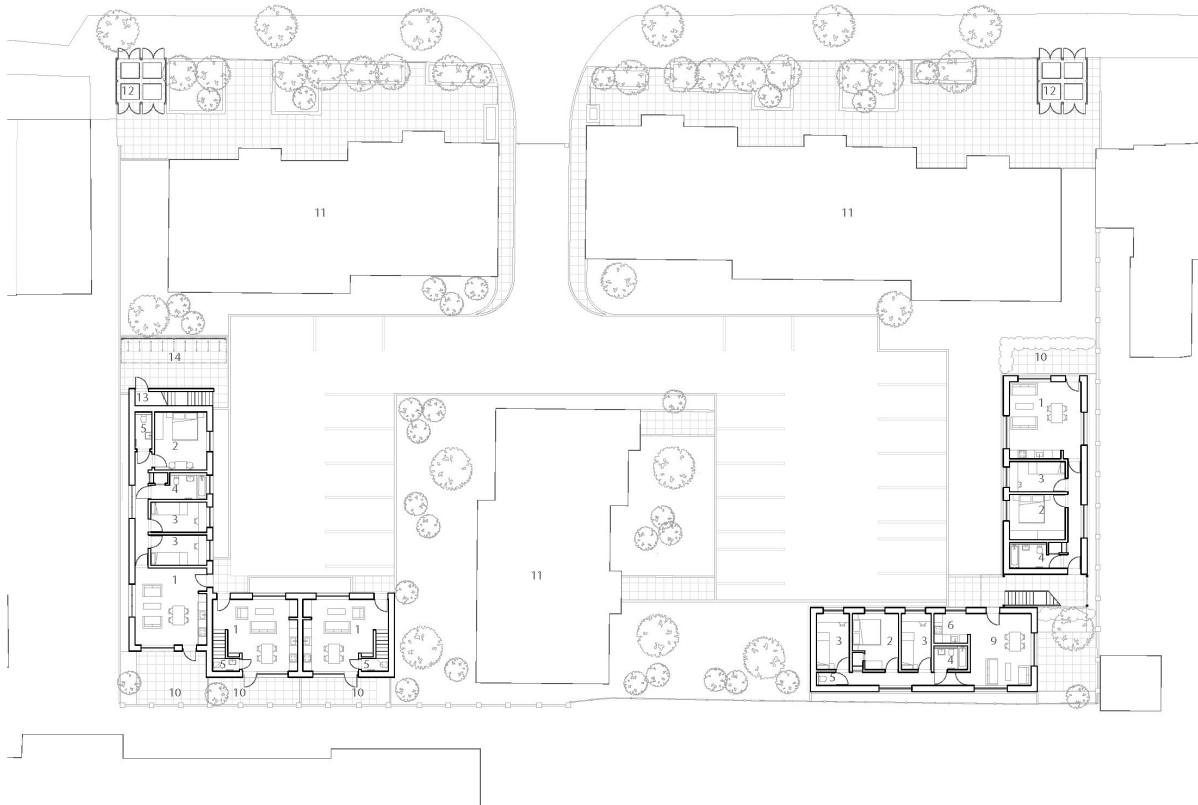
The structure is visible inside on all exposed soffits and is recalled outside with the timber hit-and-miss façade, elegantly framed by thin metal profiles, also marking floor plates and openings, and the elegant side-to-side black glass PV roof. Roof slopes are all north to south, in order to optimise on the south side the photovoltaic energy harvesting.



Before image of carpark site  
Source:Edward Williams Architects

*Edward Williams Architects*

Ground Floor  
1:300 @ A4



## Client's view

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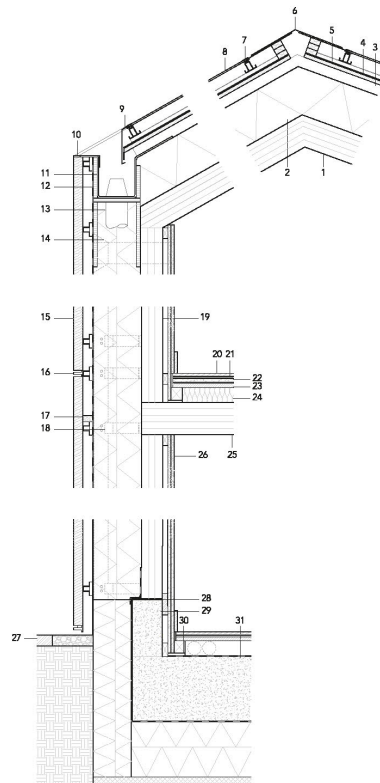
This development really adds to the site and enhances the sense of community for the existing development. Its imaginative timber design and elegant courtyard garden has already made it a local talking point. It's especially pleasing that the scheme is also very sustainable and helps sets a new standard for the neighbourhood. It has received a lot of admiring comments locally and we have already agreed the rental of half the homes, prior to their official release in September.

*Sebastian Church, director, Cliveden Land*

**Typical facade Detail  
1:20 @ A4**

**Key:**

1. Exposed CLT ceiling
2. Mineral wool insulation
3. Ventilation cavity
4. OSB roof support
5. Breathable waterproof membrane
6. PPC aluminium ridge flashing
7. PV panels substructure cross rail
8. Integrated photovoltaic panel
9. PPC aluminium eaves flashing
10. PPC aluminium gutter trim
11. Fabricated aluminium gutter with RWP leaf guard
12. Ply gutter support
13. Rainwater downpipe
14. Ventilation duct
15. Hit and miss timber batten rainscreen
16. PPC aluminium floor marker
17. Fire cavity barrier
18. Helping hand bracket to support rainscreen rail
19. CLT wall structure
20. Timber flooring
21. Electrical underfloor heating
22. Cementitious board with resilient acoustic underlay
23. Plywood subdeck
24. Mineral wool acoustic insulation
25. CLT structural slab
26. 2 layer Soundbloc 'F' plasterboard
27. External concrete pavers
28. Damp proof course
29. Concrete upstand
30. Acoustic isolation strip
31. Concrete slab foundation



## Project data

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**Start on site** October 2022

**Completion** August 2022

**Gross internal floor area** 61m<sup>2</sup>

**Gross (internal + external) floor area** 959m<sup>2</sup>

**Form of contract or procurement route** JCT SBC without Quantities 2011

**Construction cost** Undisclosed

**Construction cost per m<sup>2</sup>** Undisclosed

**Architect** Edward Williams Architects

**Executive architect** Edward Williams Architects

**Client** Cliveden Land

**Structural engineer** HRW Engineers

**M&E consultant** DSA Engineers

**Acoustic engineer** KP Acoustics

**CLT engineer** Canducci Group

**PV roof specialist** GB Sol

**Fire consultant** JGA Fire

**Landscape designer** Meeuswsen Muldoon

**Planning consultant** Michael Borroughs Associates

**Project manager** Edward Williams Architects

**CDM co-ordinator** Goddards Consulting

**Approved building inspector** London Building Control

**Main contractor** KF London

**CAD software used** Revit

## **Environmental performance data**

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**Percentage of floor area with daylight factor >2%** Not supplied

**Percentage of floor area with daylight factor >5%** Not supplied

**On-site energy generation** 17031.85 kWh annually, peak capacity of 19kWp

**Annual mains water consumption** 104.49 l/p/day

**Airtightness at 50Pa** 866.316 m<sup>3</sup>/hr/m<sup>2</sup>

**Heating and hot water load** 46.05 kWh/m<sup>2</sup>/yr (heating), 22.97 kWh/m<sup>2</sup>/yr (hot water)

**Overall area-weighted U-value** Not supplied

**Design life** Not supplied

**Embodied/whole-life carbon** Not supplied

**Annual CO<sub>2</sub> emissions** 23.04 kgCO<sub>2</sub>/m<sup>2</sup>