

IN PRACTICE

## Designing for light on an enclosed plot

*Peter Culley describes the challenges Spatial Affairs Bureau faced in designing Bouverie Mews, a house for an artist on a heavily constrained site in north London*

'The Mews House' is a new-build art studio, gallery and two dwellings of around 500m<sup>2</sup> for a London-based artist, currently under construction in Stoke Newington, North London. Occupying the site of a former light industrial workshop, it is a hidden compound that retreats from the city and then gradually opens up to the sky, surrounding woodland and Victorian rooftops as residents and guests move through the succession of spaces.

The property is entirely landlocked on the ground floor, surrounded by neighbouring buildings and boundary walls, except for the 6m-wide opening onto the narrow access point, Bouverie Mews, at the south of the site.

The longest uninterrupted site dimension, of around 30m on the east side of the property, is along the historic and densely wooded Grade II-listed Abney Park Cemetery. A three-storey former parachute factory – now apartments – forms the northern flank. To the west

there are one-storey brick garden walls with terraced homes beyond. At the south-west is a double-height former ballroom and three-storey warehouse built to the boundary line.

### Massing and program distribution

As a response to the highly constrained context, the building massing is resolved as two separate blocks connected by a bridge with a small courtyard tree-fern garden open to the sky in-between.

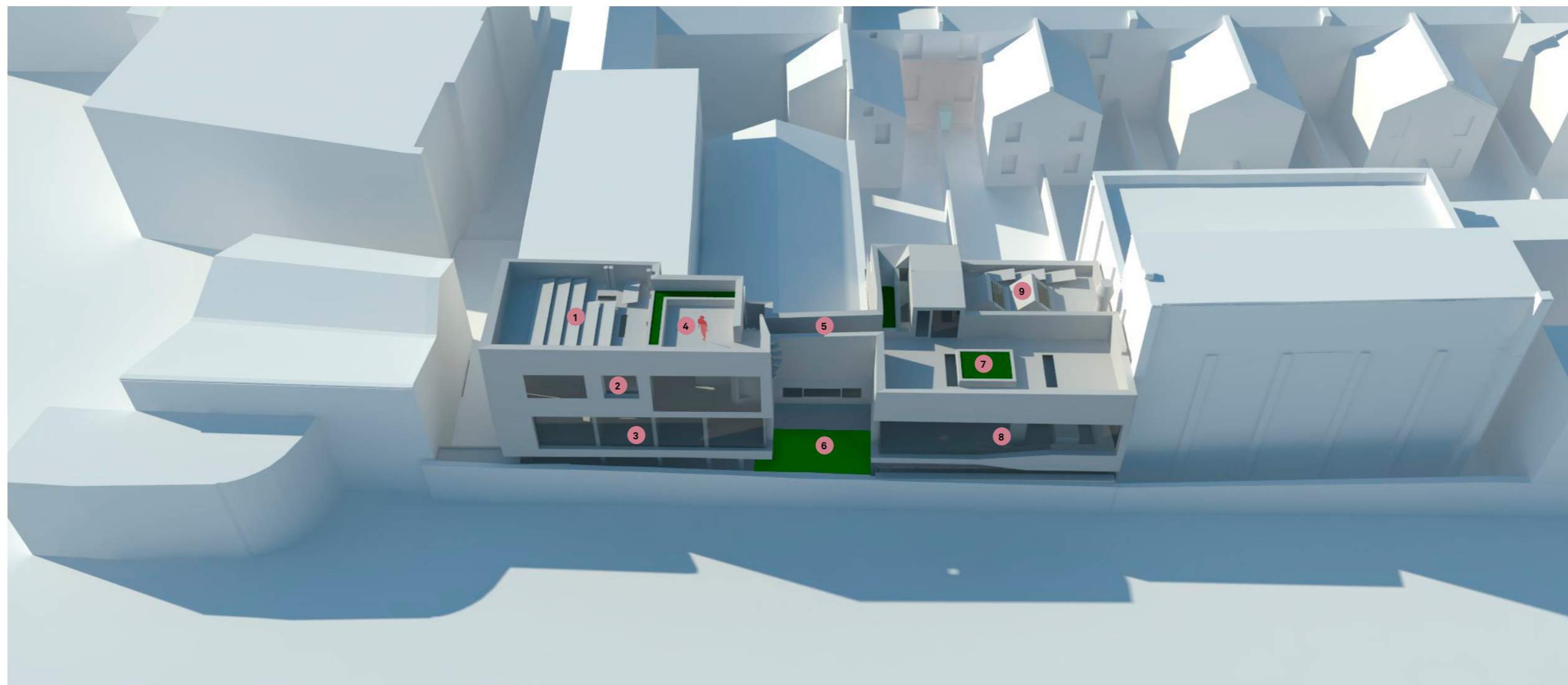
The artist studio component is arranged on the ground and basement levels of the north block, with a three-bedroom primary residence on the first floor spanning both blocks, and a two-bedroom flat on the second floor of the south block. The south block is raised one level off the ground to provide easy access for materials going in and artwork coming out and also to create a sheltered sculpture court. The south block is higher than the north block, due to the taller height of the adjoining building at this part of the site.

### Designing for light in a closed perimeter setting

Because of the entirely enclosed ground floor perimeter, the artist's studio relies on light from above via a large structural glass trapezoidal rooflight at the west, along with a row of clerestory windows peeping above the cemetery wall to the east, and a window and glazed door onto the courtyard at the south. The first floor primary residence also has rooflights on the west side to form a north-lit gallery space. Windows were ruled out due to overlooking issues with neighbouring gardens. Both first and second floors have the window bias towards the sanctuary of the woodland at the cemetery to the east.

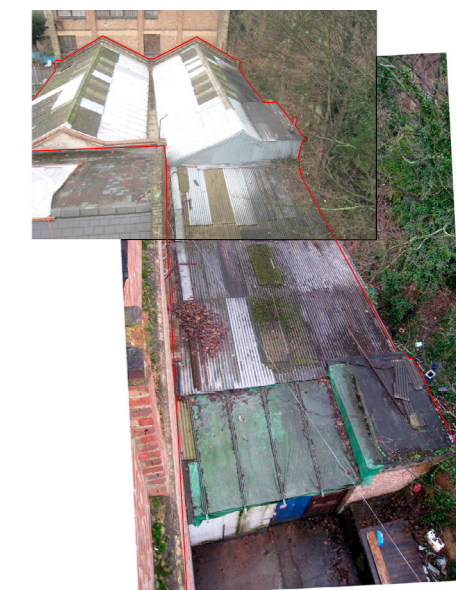
### Roof gardens and privacy

Each block has its own roof garden. On the two-storey north block the deck and kitchen garden are located towards the cemetery side and have high parapets, so that views of people on the property



1. Solar farm
2. Two-bed flat
3. Three-bed flat (sleeping accommodation)
4. Upper roof garden
5. Bridge
6. Courtyard
7. Lower roof garden
8. Three-bed flat (living accommodation)
9. Top-lit gallery (art studio below)

**Below** Architect's photomontage showing original condition of site (outlined)



are not possible from or to neighbouring gardens or houses and to create an enclosed 'sky-room' condition. The final arrangement was developed with the London Borough of Hackney by means of a series of viewshed and rights-to-light studies prior to submission of a full planning application.

The un-overlooked rooftop on the three storey-high south block is arranged partly as roof garden and partly as miniature solar-farm.

### Party wall awards

There are seven adjoining and affected freehold properties, generating a total of 12 party wall awards between freeholders and leaseholders. Due to the original site conditions, large portions of the existing boundaries were not visible for inspection until the demolition was completed. Remedial works to several of the neighbouring structures will be carried out while those conditions are accessible as notifiable works by direct agreement between relevant parties.

### Demolition

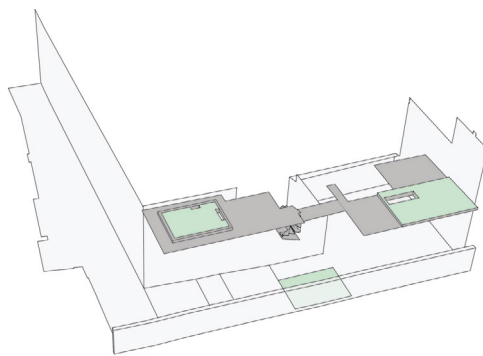
A first-stage demolition package was carried out that required careful removal of the existing structures on the project site, in many cases by hand in order to avoid disruption to the neighbouring conditions. Perhaps of most concern from an integrity standpoint was the Victorian Abney Park Cemetery Wall, which, though independent from the existing buildings on the project site, was in a vulnerable state in some places.

One structure within the site boundary – an in-situ concrete Second World War air raid shelter, used to house tens of people at a time and built partly above ground, partly below – had been cast against the cemetery wall. We decided to leave the vertical portions adhering to the wall to avoid disruption. In doing so, an important reference is made to earlier London histories that are increasingly difficult to reconcile with contemporary life.

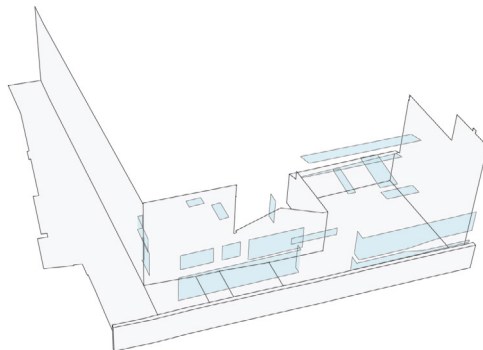
### Structural design in relation to neighbouring conditions

For obvious reasons, the cemetery wall and its foundations are 'six feet under' the existing ground level. In response, the columns that support the eastern edge of the taller south block are set back from the wall by around 1m to avoid the existing footing and at the same time allow the historic textured wall to remain visually separate from the new construction.

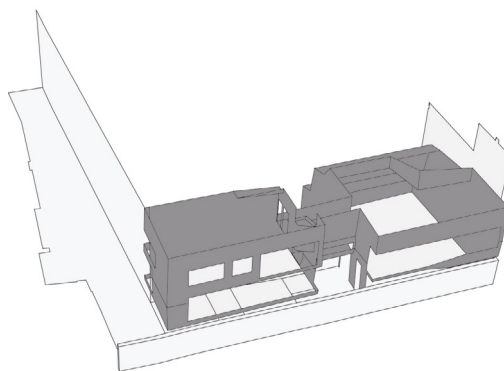
Similarly, alongside the neighbouring three-storey building on the opposite side, the access zone to the second floor flat is effectively outdoor, though covered, in order to limit the need for a new structural wall and foundation on



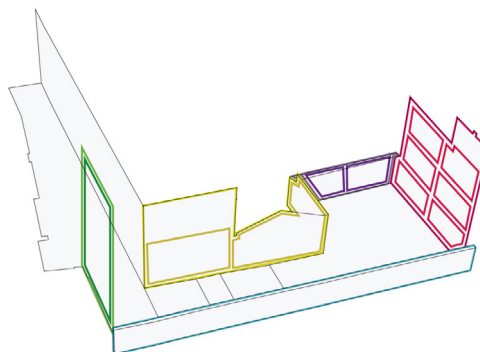
Gardens at three levels



Window and rooflight placement



Opaque envelope



Project by component elements

Physical limits: party wall awards over seven adjoining properties



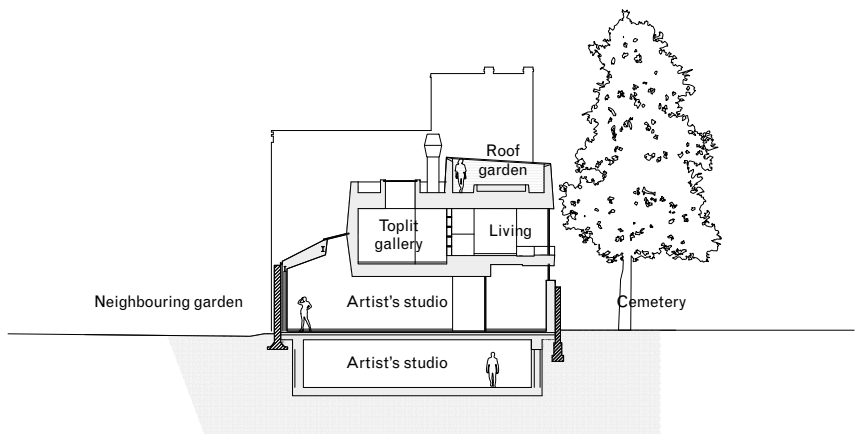
the boundary line. This saves valuable useable space and minimises the physical impact on existing conditions. The precast stair and the first and second floor slabs, where they extend to the existing building, are cantilevered from an in-situ cast concrete fin wall that also forms the visual western edge of the sculpture court.

The north block basement is set back from the three-storey apartment building to minimise the impact from the thrust of that foundation, while the tall, unsupported garden walls to the west are temporarily shored during construction. Due to the heavily constrained site and limited laydown area, the structural frame design evolved into a hybrid form. It became a concrete frame at the ground and first floor of the south block, where the cantilevered conditions could be achieved and exposed concrete was desirable; and steel from large-component prefabricated forms for the above-ground and mostly concealed structure of the north block, which could be delivered and installed immediately.

#### Envelope and adjoining structures

Where new walls meet existing ones, different approaches were taken, depending on whether the neighbouring space beyond was conditioned or ambient external. If conditioned, measures were taken to plan for a change in moisture content in the existing masonry as a result of enclosing the space on the up-to-now exterior. Overall, the thermal performance has been designed to exceed building regulations with beyond-requirements wall insulation and triple-glazed fixed structural and operable windows throughout.

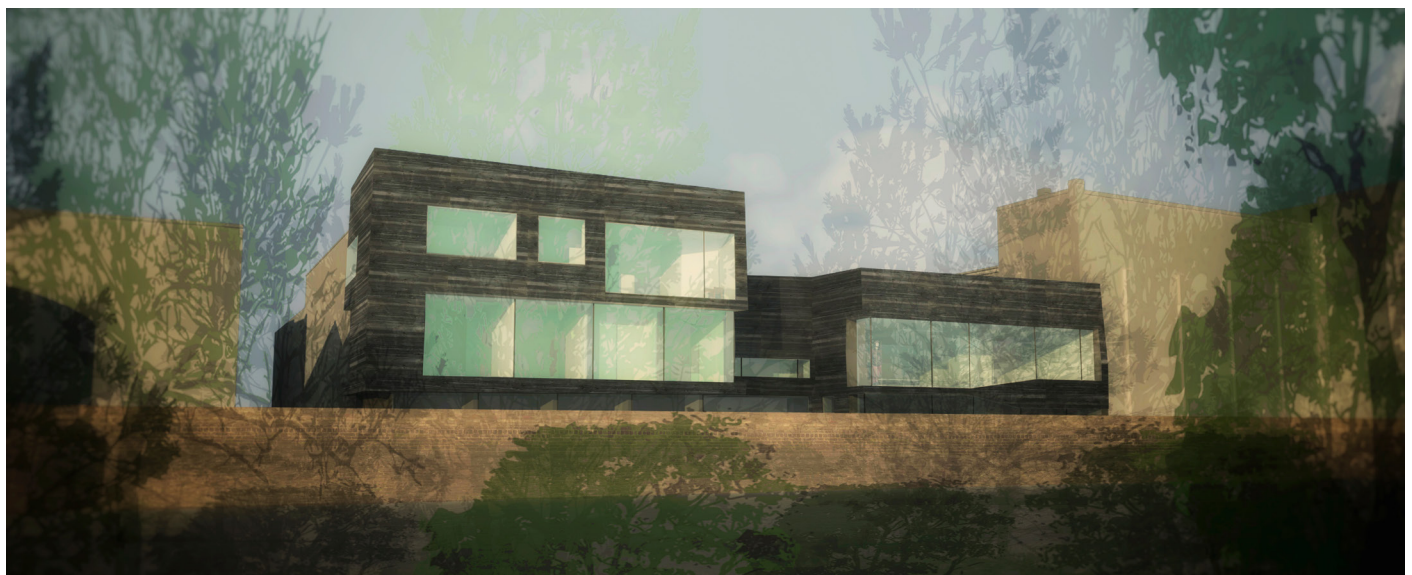
*Peter Culley is founder and creative director of Spatial Affairs Bureau*



West-east section through north block



Courtyard space under construction



Visualisation of east elevation