

**BUILDING THE NATIONAL GRAPHENE INSTITUTE
MICRO-APARTMENTS COME TO LONDON
CPD: INSULATING FLAT ROOFS AND BALCONIES
INSIDE: CONTACT NEWSLETTER**

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SMALL WONDERS



Small, compact flats on unconventional city centre sites are providing affordable housing for urban workers. **Stephen Cousins** reports

TO GET ON THE HOUSING LADDER in London the average first-time buyer now requires a minimum salary of £77,000, but in reality earns just £27,999, revealed KPMG and Shelter in a report published shortly before the election. So affordable housing has become a concern for all but above-average earners or those with parents who have thousands of pounds to spare.

The situation has left many young people - and even those in their late thirties and early forties - trapped in a cycle of short-term lets or considering unconventional forms of home ownership, as the increase in houseboats moored on

the capital's canals has demonstrated.

A phenomenon that could help reverse this trend, and one backed by London mayor Boris Johnson, is the micro-apartment: scaled-down one-bedroom flats targeted at singles or couples who earn too much to qualify for social housing, but too little to buy on the open market.

Micro-apartments are typically centrally located, close to transport links and built on brownfield or hard-to-develop sites that are not suitable for traditional forms of development. Following a precedent set by micro-apartment projects in New York, Vancouver (box, *overleaf*) and Tokyo,



South Kensington, and is now working on a second in Southwark. "Although local authorities are resistant to space standards falling below the [mayor's *London Housing*] *Design Guide* minimum, there is a trend to discuss the possibility of having smaller, more compact typologies, particularly for younger people unable to get on the housing ladder who need a different type of living accommodation as a stepping stone to either rental or home purchase."

Key holders

This one-bedroom typology is driven by the growth in households of one person and couples, many of whom are keyworkers, such as nurses, firemen and teachers, who are unable to afford high rents or mortgages.

First-time buyers are increasingly ready to sacrifice space for a home near their workplace. A London study last year from property consultancy Knight Frank found 45% of 18-to-24-year-olds and 37% of 35-to-44-year-olds would consider living in a small studio flat of around 300 sq ft (27 sq m) if it was in a central location.

Pocket can achieve a 20% discount on open market sale prices – a level considered affordable to couples with a combined annual income of around £66,000 – by reducing floor space to around 37.5 sq m, in line with the GLA minimum. However, it has delivered studios as small as 29 sq m.

Small flats enable the developer to create more units per scheme (one-bedroom flats by their nature are more profitable) and by building in modest numbers – up to 40 units – it can exploit tight infill sites previously considered unsuitable for development, or as part of larger-scale regeneration projects.



Pocket's Wandsworth scheme, designed by Metropolitan Workshop, sits on an awkward corner site

"Pocket tends to operate on sites that might not have worked for other development forms. Because the flats are smaller, the building can be more sensitive to its urban context," says Simon Toplis, partner at HTA Design, architect of the 17-home Pocket scheme at Oak Grove in Cricklewood. HTA is now working on a 22-home scheme on a former garage site at Willingham Terrace in Camden.

"What makes it work is a combination of the tight site and strong political support for affordable housing from local authorities, who are keen to increase their affordable housing types and bring forward council-owned land," says Toplis.

In exchange for compact living, Pocket offers high-quality interior and exterior design by respected architects, such as HTA, PRP, Metropolitan Workshop and others. The focus is on creating a psychological sense of space, using large windows to bring lots of natural light into intelligent, ergonomically designed layouts that have good storage and well-located switches and sockets.

"There's a real commitment from Pocket to make sure they sign off on every aspect of the design, right down to minor details, even the rainwater goods on the front elevation. Their design director, Ross Edwards, is a great architect and very ambitious about quality of architects they work with," says Toplis.

Canadian developer Realstar Living has adopted a similar strategy. Its Stockwell Park scheme offers studio flats >

London flats have been designed as small as 26 sq m, rather than the 37.5 sq m minimum required by the Greater London Authority's (GLA) Supplementary Planning Guidance, thanks to special dispensations.

Developer Pocket Living has developed several micro-flat schemes backed by a £21.7m, 10-year interest-free loan from the GLA. It offers one-bedroom flats for sale at 20% below the market rate. Last month Pocket applied for planning consent for its largest scheme to date: a 24-storey, 83-unit micro-flat tower in Wandsworth, south London.

"People are crying out for this type of smaller-scale accommodation in London," says Andy von Bradsky, chairman of PRP Architects, which designed Pocket's £1.5m Star Road scheme in

Above: Pocket's 24-storey, 83-unit scheme in Wandsworth, south London, is its biggest to date

Right: the HTA-designed 17-unit Oak Grove scheme in Cricklewood is now under construction

"People are crying out for this type of smaller-scale accommodation in London"
Andy von Bradsky, PRP Architects

Technical Micro-apartments



Flats at Pocket's Star Road scheme in South Kensington are about 40 sq m (floorplan, below)

> of between 17 sq m and 27 sq m that share common areas and a full-time onsite manager, to rent for £1,000 a month.

"The tenants are what we think of as professional, independent workers, but not necessarily young - everything from policemen to nurses, to people in ad agencies," says Ryan Prince, co-founder and chairman of parent company Realstar Group. "The demographic is really anyone working in London making £30,000-£35,000 a year. The model only works in places like London or New York, where you have such incredible density of growth and employment, and people want to live close to where they work."

Ryan says the challenge of micro-apartment schemes for rental is aligning economics with planning. He says planners

"The tenants are what we think of as professional, independent workers"
Ryan Prince, Realstar Group

tend to prefer units with three or more bedrooms, despite the emerging demand for smaller units. And the requirement for 25%-35% affordable housing - which also applies to build-to-rent schemes - makes outright sale more attractive.

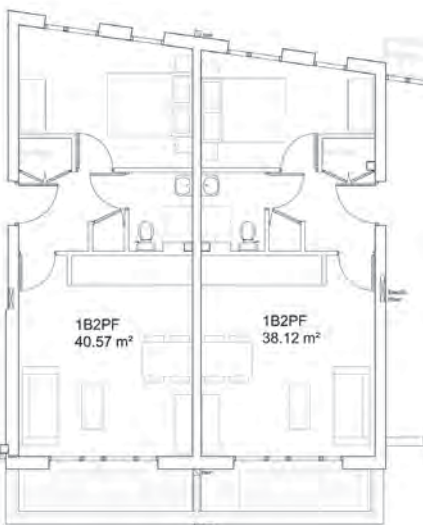
"Our view is that what we are offering is already affordable housing," he says. "It just happens that it is not social housing run by a registered provider. We want to be in a category, similar to low-cost airlines, where we don't have to be a state-run subsidised organisation to deliver great value-for-money accommodation."

Flats packed

Private-rented micro-apartments have found a new guise in the shape of Y:Cube, the YMCA's new £30,000 modular flat-packed home concept, which was rolled out on its first project earlier this month at Merton Road in Mitcham, south London.

Y:Cube is the brainchild of architect Rogers Stirk Harbour & Partners. The self-contained single-occupancy studio flats are manufactured complete with internal and external finishes, services, and insulation, delivered to the site and dropped into position by crane.

These "plug and play" demountable units can be fixed together in almost any configuration, up to three storeys high. >



Mini-homes made for Manhattan



London is not the only city where rising property values and demand for central locations is encouraging developers, architects and contractors to create micro-apartments. In New York, where pressure on land spawned skyscrapers, the potential of micro-apartments is being given serious attention.

In July 2012 the city's Department of Housing Preservation and Development launched the AdAPT NYC competition to develop a micro-apartment housing model for a site in Kips Bay, Manhattan. The project attracted global attention, and a scheme by Rogers Stirk Harbour & Partners with UK developer Pocket Living, New York architect Alexander Gorlin and property company BFC Partners was among the five finalists.

The competition was won by Monadnock Development, Actors Fund Housing Development Corporation and nARCHITECTS' design for a nine-storey apartment block (below) that will contain 55 prefabricated studios of 25 sq m to 35 sq m (above).

The project necessitated a waiver in city zoning regulations on minimum apartment sizes and is scheduled for completion this summer. In addition to the prefabricated micro-apartments, the scheme aims to provide residents with communal space, and has a rooftop garden, lounges on individual floors, a deck, multipurpose communal lounge, cafe and fitness room.

North of the border in Canada micro-apartments are sprouting up even faster, to satisfy the demand for housing in Toronto, Vancouver and Ottawa. Toronto-based developer Urban Capital is leading the way with its Smart House micro-condo concept. The 25-storey Smart House Toronto project, which contains 241 apartments of as little as 27 sq m, is under construction and scheduled for completion in 2017. The developer has also expanded the concept to Ottawa, where it is constructing a nine-storey building with 151 units starting at 29 sq m.

Tom Ravenscroft



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Technical Micro-apartments

> Construction is fast and cheap: the Merton Road site was ready for tenant handover in three months and achieved a 25%-30% improvement on development costs compared with traditional builds.

Floorplans are tight, at just 26 sq m, but for the YMCA's targeted low-to-middle-income renters, many of whom live in hostel accommodation or are on waiting lists for social housing, which they have little chance of getting, the opportunity to live in a property with its own bathroom and front door is a big draw.

"The main option available to younger people moving to urban areas today is really just a room in a house, and for that, even in London, you are looking at paying anything between £120 and £150 a week. Even the 80% market rent affordable housing model is out of the reach of many of them," says Andy Redfearn, director of housing and development at YMCA London South West. "For the equivalent cost of renting a room, we can provide them with decent living space, a separate double



Rogers Stirk Harbour & Partners' fully demountable Y-Cube scheme is being prototyped on a demolition site in south London for Lewisham Council (opposite)



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bedroom and their own front door – something that’s aspirational and well designed, but affordable.”

Structurally, the units are built around a simple panellised system of engineered timber straightened with lengths of steel, designed for lightness and ease of transportation. Factory production by manufacturer SiG, which also installs the units on site, enables high levels of airtightness and thermal insulation, which significantly cuts tenants’ fuel bills.

Deconstruction sites

Each Y:Cube is fully demountable in a bid to prompt councils to think differently about land and bring into use sites that might otherwise have remained dormant.

Ivan Harbour, partner at Rogers Stirk Harbour & Partners, tells *Construction Manager*: “A major issue in London and the south-east is land cost. With Y:Cube you can install it, it might remain there for a period of time [the YMCA suggests five to 10 years], then you can redeploy it somewhere



else in the future. This makes it suitable for use on brownfield land, or on land that is earmarked for future regeneration that is sitting unused. The whole concept of regeneration of ownership has been missing up until now.”

The Y:Cube scheme is a trial and, based on feedback from tenants, the YMCA plans a pipeline of schemes across the country.

“The idea is to license it out,” Harbour says. “We want to deliver schemes in different parts of London, the south-east and beyond. A number of local authorities, registered housing providers and developers have expressed an interest. They will get access to the design/ construction system and our delivery

“The whole concept of regeneration of ownership has been missing up until now”

Ivan Harbour,
Rogers Stirk
Harbour &
Partners

partners, doing away with a traditional developer and the associated costs.”

Separately, the architect is working on a 22-unit scheme based on the same concept, but with two-bedroom demountable flats, for Lewisham Council, on the site of the former Ladywell Leisure Centre building, which was demolished in early 2014 and currently sits vacant pending redevelopment.

As growing support suggests, micro-apartments could play a key role in satisfying demand for decent, affordable housing in London and other cities. And while the RIBA pushes for minimum space standards in the Building Regulations, others argue that a less rigid approach will get more quality-designed affordable housing built.

“This is a big discussion point in cities,” says PRP’s von Bradsky. “PRP is in design development stage on other compact urban living schemes, including private- and market-rented. These new typologies are ready to be developed.” **CM**



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