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Social Housing in London: Pilot Projects by Metaphorm Architects

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Fig. 1: Brandon Street's ceramic-clad façade in gradient tones

At a time when the UK's housing shortage was already at an historic high, the recent economic downturn and the further diminished public funds have put critical pressure on housing budgets, and completions have shrunk to an all-time low. Whilst yearly housing requirements amount to 240,000 dwellings per year, only 100,000 are currently being delivered, the lowest figure since the 1920s. Simultaneously, demands for better quality, better space standards, higher sustainability, and for social housing to be brought qualitatively in line with market housing, have made solving the equation yet more difficult. UK housing is in crisis.

Against this background, it is especially remarkable that Southwark Council, one of London's largest Boroughs, should embark on a programme of pilot projects to explore how to deliver better affordable housing. With a series of concept buildings, set up like a piece of applied research in Town Planning, Southwark Council's aim was to remove differences between public and private housing and to start to evolve a new generation of residential architecture for Southwark which expresses itself in terms of an urban form which is contemporary, light, flexible, mixed tenure and contained within a mixed use environment.

The initiative was based on the regeneration of the Heygate Estate, located within the Elephant and Castle area of central London, a social housing quarter from the 1970s, latterly notorious for decay and crime, and home for over 3000 people. The plan envisages the complete demolition of the existing buildings and their replacement with a socio-economically and environmentally sustainable mixed development.

The necessary re-housing of all current residents was used by Southwark as an opportunity to define new standards for public housing in London, by initiating a programme of multiple pilot projects, comparable to the highly influential German IBA (Internationale Bauausstellung) International Town Planning Exhibition during the 1980s, for which architectural luminaries were invited to design pioneering housing proposals.

Architectural competitions were organised for fifteen centrally located, yet disparate sites in Southwark. Both established and up-and-coming practices participated, and Metaphorm Architects won two of the contests: for Brandon Street and for Library Street. In developing the design proposals, Metaphorm Architects reconsidered issues of urban configurations, building morphologies and construction, of planning consent (which, rather than prescriptive, is intensely dialogue-oriented

Fig. 2: Black brick side elevation

Fig. 3: Entrance to common courtyard

Fig. 4: Living area

Fig. 5: Pre-cast concrete benches for public

in the UK, and often political), and of procurement, which predominantly takes the form of Design-and-Build contracts for public works. Discussions with future tenants and current neighbours further informed the design approach.

To deliver the projects, Southwark Council formed strategic development partnerships with like-minded Housing Associations (non-profit developers, similar in role to that of the Hong Kong Housing Society). London & Quadrant, one of the largest and most established HAs in the UK for delivering affordable housing has been the Council's partner for Metaphorm Architects' two schemes.

At Brandon Street (Fig.1-5), Metaphorm Architects' site response was, despite high density requirements, to create urbanity through public open space, to initiate and acknowledge Brandon Street's increased future significance as an axis into the regenerated Elephant & Castle, to create characterful, yet practical dwellings, and to retain a number of existing trees.

The black brick side elevations are a contemporary extension of the established material pattern along adjoining roads. Ceramic-clad in 37 gradient colour tones, ranging from honey yellow to bordeaux red, the main façade breaks this continuity through a strong contrast, announcing the changing nature of Brandon Street and creating an element of delectation. Meandering past the existing trees, it defines the character of both, external public and internal private spaces. The grey-white dual toned pre-cast concrete benches following the curvilinear façade are an invitation to stay, extended in particular to the children of the pre-school adjoining and to the elderly of the almshouse opposite.

Urbanistic considerations led to the creation of two blocks, each five storeys high, separated through a small private courtyard. The orientation of the apartments varies between ground floor and upper floors. By not requiring windows on the eastern facade, this layout also permits the creation a public space which does not interfere with the privacy of the ground floor units.

The use of an off-site manufactured Light-Gauge-Steel structure for tight-radius undulating walls is unprecedented, and the architectural design had to provide precisely determined variable pre-fabricated wall panel widths, as a function of radii, window positions, minimum and maximum wall cavity widths, etc, to avoid faceting of the façade. The building envelope comprises walls of inner leaf LGS panels

Fig. 6: Library Street's apartment block in the west

with integral insulation and outer leaves of masonry or render on insulation, resulting in a compact wall construction achieving U-Values as low as 0.11W/m², a PassivHaus level, within an average-sized wall depth.

At Library Street (Fig.6-11), an apartment block was created accommodating both large family flats, and an array of four-bedroom town houses. The intention was to establish a sequence of urban and architectural public, semi-public and private open spaces. Metaphorm Architects' design resisted the competition brief strategy of continuing the street front along the site-bisecting Milcote Street. Instead, a perimeter development with a courtyard layout was adopted, creating a green public square by linking new and existing buildings, and incorporating a community garden. The apartment block is located on the western half of the site, angled in plan and stepping down towards the lower, listed, former library building adjoining south. On the eastern site half, the row of town houses encloses the green open space towards north. Access to the apartment block is from the courtyard. The central position of the staircase allows for two short lobbies with a lift serving two to three flat entrances each.

The apartments benefit from generous loggias, terraces, balconies, or wintergardens. One of the best panoramic views over London can be enjoyed from the large landscaped roof garden, planted with trees and flowers, and with a pergola for festivities, serving all residents of the new development. The living spaces are mostly orientated towards south, east and west, maximising sunlight, and all upper floor windows are storey-high, providing ample daylight to the interiors.

The houses were designed with a first-floor piano nobile, with a generous floor-to-ceiling height and a full-width balcony, overlooking the community garden in its entirety.

Beside scale and massing, materials and detailing were key to integrating the building with its partially listed conservation area neighbours. Referencing the colour variation of the adjoining buildings, brick in five different shades was chosen as the main material. However, in contrast to the context, a slim-line variety with a hand-made appearance was used, arranged in a random bond. Subtly protruding and receding, storey-high brick panels in each of the five colour tones, and white pre-cast concrete elements structure the façades.

Both schemes achieve BREEAM Code for Sustainable Homes Level 4. Energy conservation is attained by high performance building envelopes aided by whole-house heating systems with heat recovery in every unit, coupled with a high standard of airtightness, underfloor heating and thermally broken aluminium-timber windows. The centralised plant rooms, uncommon in UK residential developments, make the imminent switch to the planned district-wide CHP-plant straightforward. Greywater recycling, rainwater harvesting, and stormwater attenuation at Library Street's roof garden further contribute to multifaceted sustainability.

While under the UK planning system there are no prescribed controlling parameters such as height, plot ratio, or coverage radio, as used in Hong Kong, building performance and layout

Fig. 7: Row of town houses in the east

Fig. 8: Viewing from public square towards town houses

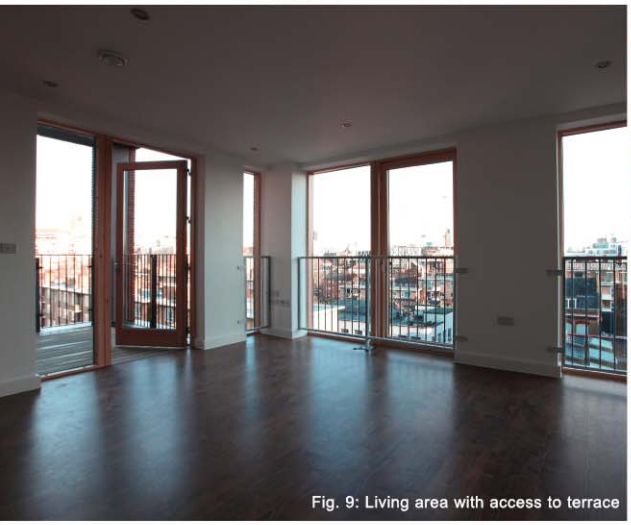

Fig. 9: Living area with access to terrace

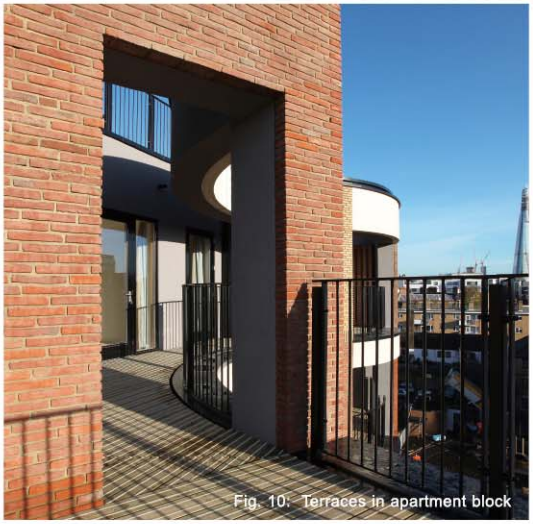

Fig. 10: Terraces in apartment block

Fig. 11: Apartment block from community garden

design are highly codified for housing. The two projects were designed referencing a multitude of space, layout, sustainability, accessibility, security and detailing standards (e.g. London Mayor's Housing Design Guide, Southwark Council Residential Design Standard, Joseph Rowntree/ Habinteg Lifetime Homes, Greenwich Wheelchair Site Brief, Association of Chief Police Officers Secured by Design, Homes & Communities Agency Design & Quality Standard and Housing Quality Indicators, National Housing Federation Standards and Quality in Development, and NHBC Standards for building insurance).

The two projects provide 100% affordable units of different tenure types. All homes in the Brandon Street scheme are of social rent, equivalent to Public Housing in Hong Kong. The Library Street scheme is of mixed tenure between social rent and shared ownership. The latter is a type of intermediate housing aiming to address a market segment similar to that of the Home Ownership Scheme (HOS). Unlike HOS however, households purchase equity shares of their homes at market levels, while paying subsidised rent on the balance, and they are encouraged to acquire further shares leading to eventual full ownership as their disposable income increases, thus creating a mechanism to transition a property from subsidised stock to full market over time. In Hong Kong, the resumed HOS and the evolving "My Home Purchase Plan" are both for outright sale of housing at subsidised rates. By contrast, the UK "share ownership scheme" allows households to acquire full ownership at market prices in a progressive manner to suit their individual situations.

Both projects were realised within the modest, limited budgets of subsidised public housing, yet have been shortlisted for and won a number of national architecture awards. Metaphorm Architects' approach to maintaining quality on a low budget was based on a clear definition of spending priorities, on an efficient plan layout design, and on simple, but qualitatively high details and material specifications. Discussed and agreed with the planners, and binding part of the planning consent, materials and critical details were established early, to ensure a high quality of construction post-tender, whilst being deliverable cost-effectively under a Design & Build form of procurement.

Particularly in light of current UK housing requirements, the strength of these buildings and their pilot nature lie in their ability to demonstrate that a critical re-assessment of all project parameters, and a professional and constructive cooperation between client, planners and architects can successfully work within and overcome constraints of budget, procurement, and regulation to create affordable housing with better urban and living environments.

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HKU 1967 graduate, joined the then Architectural Office PWD as Apprentice Architect and retired from ASD in 1997. On secondment to TDD in late 80's and early 90's as Chief Architect in Shatin and NTE Offices. Now a consultant to Metaphorm Architects of London UK, which was established by two Cambridge graduates Dr Joseph Watters and Andrew Tong. Coincidently both have architect parents.