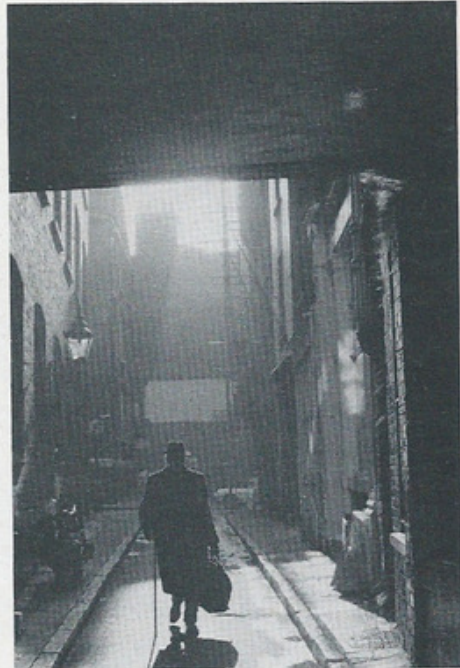


AJ

THE ARCHITECTS' JOURNAL COVENT GARDEN WALK 3 FEBRUARY 1982 60P





Woodward and Campbell

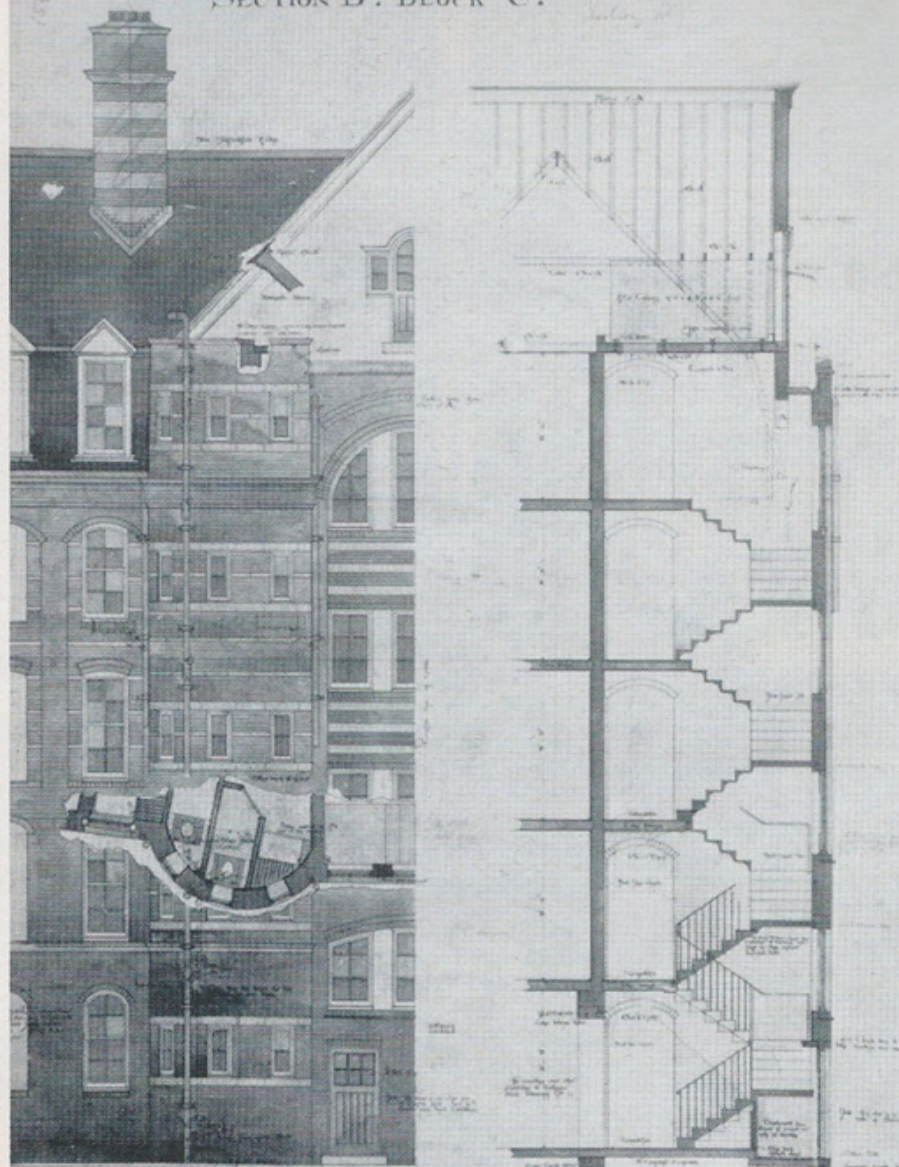


Two perspectives on Odhams

Odhams Walk, Covent Garden, London

LONDON COUNTY COUNCIL.
BOUNDARY STREET SCHEME
SECTION B. BLOCK 'C'.

3



Appraisal 1

by Christopher Woodward*

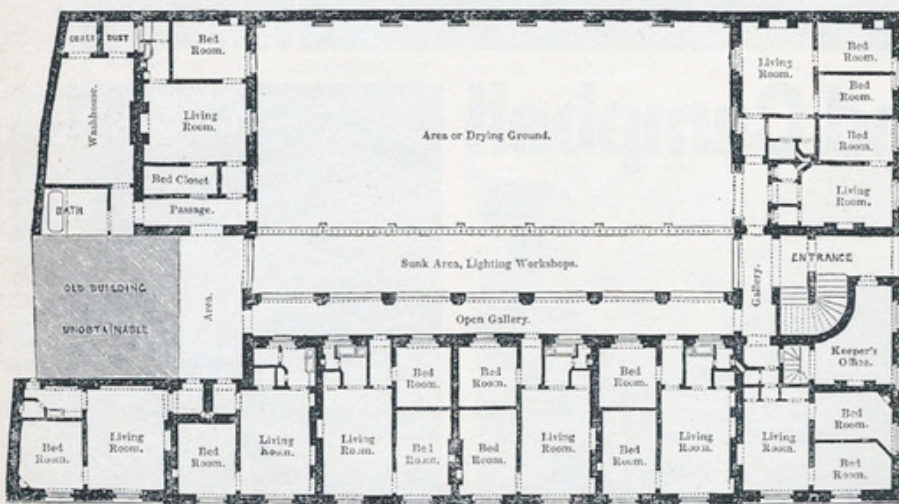
In 1840, London's fabric consisted of streets, squares, public buildings, and houses (these of yellow brick or stucco, with white-painted sash windows). The speculative commercial office block had not been invented, and the only flats were those for bachelors in the Inns of Court. At mid-century, two contrasting new housing types were produced by rival housing reform movements. In 1849, the first type, instructively called *Model Houses for Families*, at Streatham Street, designed by Henry Roberts, was built by the Metropolitan Association for Improving the Conditions of the Labouring Classes. It had a courtyard (reached by an arch off the street), from which open galleries gave access to the flats, 2. The building lined up with the street frontages of its neighbours, and its court clearly belonged to its tenants: strangers would have no business there. The second model, designed for Baroness Burdett-Coutts' Metropolitan Association for Improving the Dwellings of the Industrious Classes, by her favourite architect the crazed H. Alfred Darbishire, was of the freestanding 'slab', first seen at Columbia Road in 1862, and later horrifyingly refined in the Peabody estates. Meanwhile, for those who could choose where to live, Victoria Street was laid out in the 1850s and '60s, and lined with the first speculative flats for London's middle classes. For what was later to become 'public housing', however, it was Darbishire's model, the slab, and not Roberts' court, that prevailed.

After promising beginnings by young architects working for the LCC shortly after it was set up in 1889, at the Boundary Street and Millbank estates, 1, using joined-up slabs and Arts and Crafts styling, most public housing has since been in the slabs or blocks of the Peabody model, which was taken up, rationalised and canonised by the twentieth century reform movement. In central London, even the famous-name architects of this century, from Lutyens to Lasdun, from Tecton to the Smithsons, have not built houses, nor have they added to the stock of useful models: they have seemed content to indulge in obsessive large-scale pattern-making. Only Fry and Atkinson's eminently sensible Kensal Rise flats, derived from German rather than French examples, successfully showed how authentic modern architectural language could blur the image of 'Dwellings for the Labouring Classes'.

Covent Garden or casbahs

In the early 1970s, when the present scheme was designed, the fashionable models for public housing had become muddled: the 'Pixie Style' now rampant in most Inner London boroughs had not yet been invented, but there had been a flurry of 'casbah' housing projects from the schools of architecture. These arose from students' boredom with routine Modernist prescriptions when it became clear that anyone could do them (and in heavy precast concrete too), and

*Christopher Woodward is Sir Banister Fletcher Lecturer in Architecture and teaches at the Bartlett School of Architecture and Planning, University College, London, and is writing, with Edward Jones, *A guide to the architecture of London*.

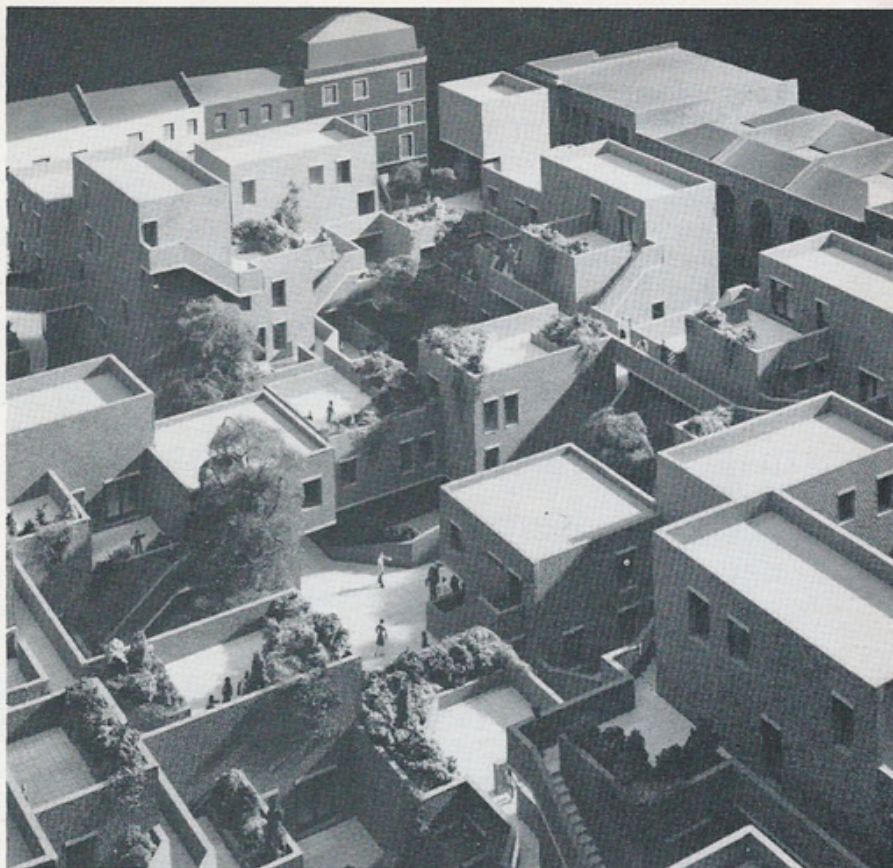


Frontis page: (top left) Covent Garden before the Odhams housing project was conceived. (Top right) A Covent Garden alley. (Middle left) Odhams Printing Press before demolition. (Middle right) The Covent Garden pedestrian cross route from street to street. (Bottom left) The new Odhams Walk housing scheme as seen from the corner of Bow Street. (Bottom right) A private covent garden.

1 The LCC's Boundary Street estate: Arts and Crafts styling for the first 'council housing'.
2 Plan of Henry Roberts' Streatham Street Dwellings 1849-50. The flats are reached via covered access galleries around the court.

from a real interest in the architectural forms of tribal communities awakened by Rudofsky's *Architecture without architects*, first published in 1964. It was supposed that the 'undesigned' and shaggy 'unfinished' look of these schemes would encourage the spontaneous outdoor urban life which the telephone and television were about to destroy. Had anyone at the time visited a real casbah, they would have found that the physical pattern was, in diagram, very like that of Covent Garden: streets, squares, houses. But the flat roofs, which in the student schemes had become devoted to the public, were in the casbah private, used as family living rooms, and were rarely overlooked. The huddled massing was good for defence against neighbouring tribes, and for shading against the sun. The first built result of these projects was another LCC scheme: the Queen Elizabeth Hall and Hayward Gallery on the South Bank, over which the public was invited to clamber like the goats on the Mappin Terraces. ▶ p38

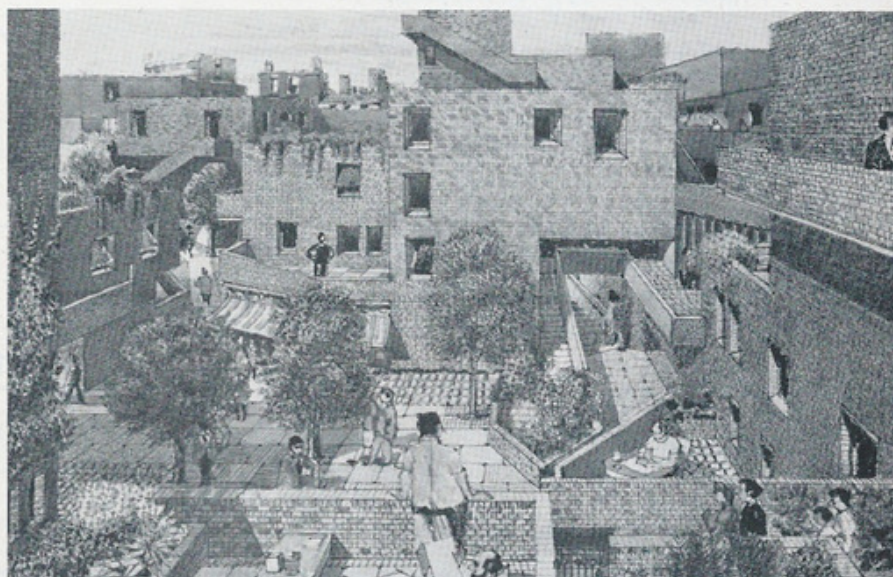
3, 4, 6, 7 Gordon Cullen's charming 'townscape' perspectives of Shelton Street and the interior of the scheme—and their realisation. 5 Model seen from the only viewpoint from which the geometry is comprehensible.



5



3



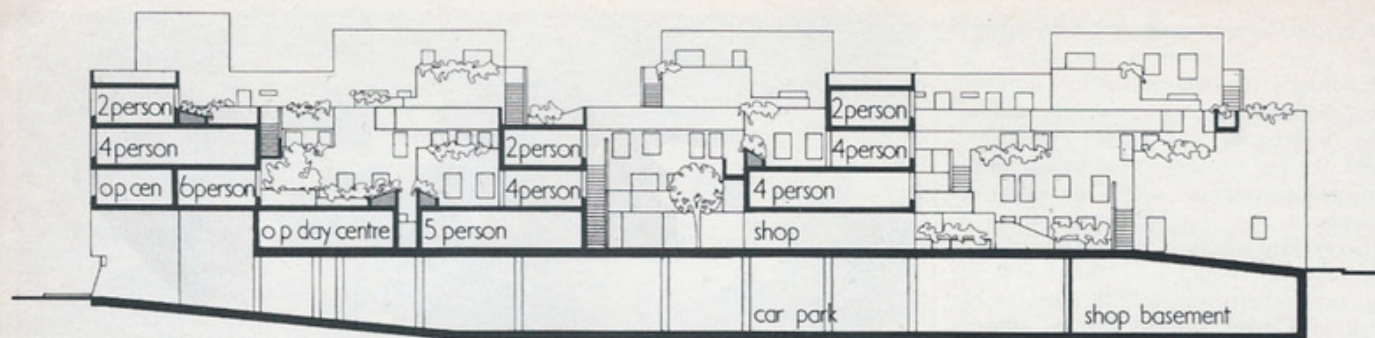
6



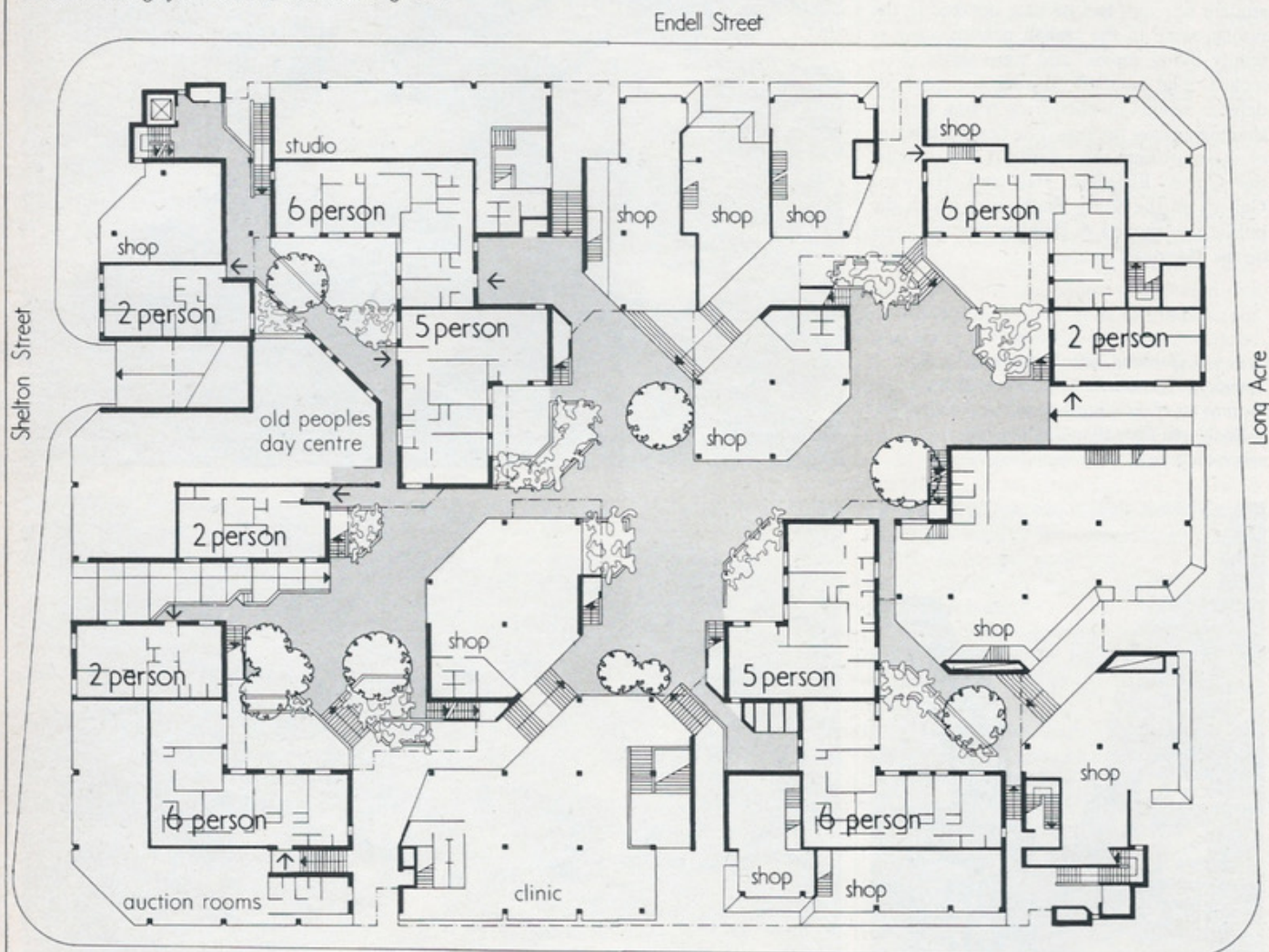
4



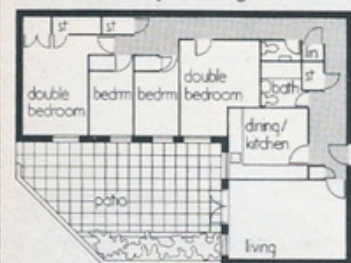
7



8 Section through from Shelton Street to Long Acre.



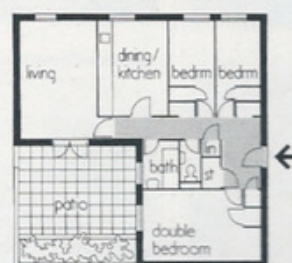
9 The mixture of dwellings and other uses.



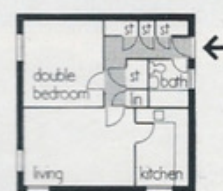
Six-person flat.



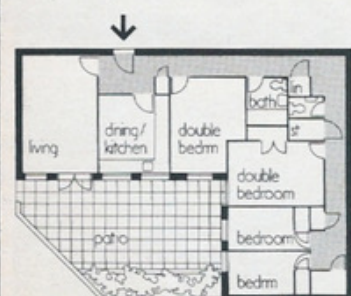
Five-person flat for disabled.



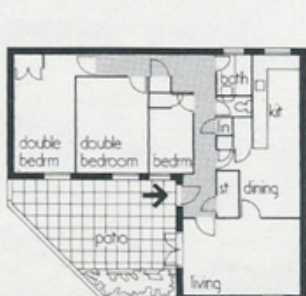
Four-person flat.



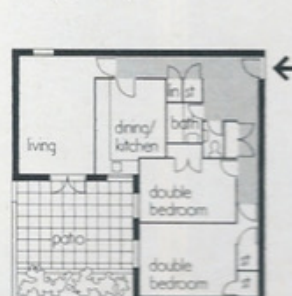
Two-person flat.



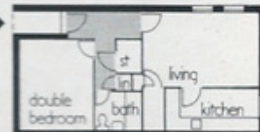
10 Six-person flat.



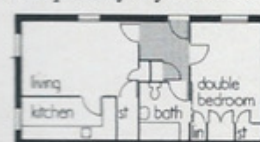
Five-person flat.



Four-person flat.

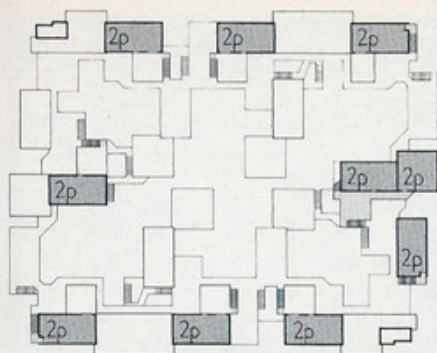


Two-person flat for disabled.

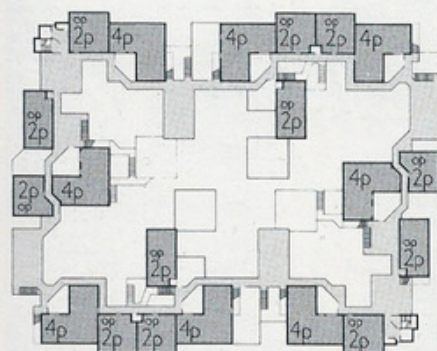


Two-person flat.

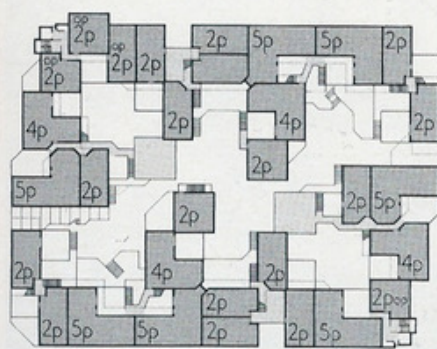
0 5 10m



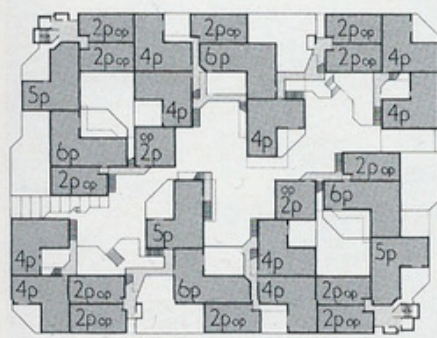
11 fourth floor



12 third floor



13 second floor



14 first floor

11-14 Yardstick housing was to be produced at a density of 472 ppha, with a mix of 50 per cent two-person and old persons' dwellings, and 50 per cent four-, five- and six-person dwellings, giving a total of 102 dwellings. 5000 m² of non-housing uses was to be provided. In 1975 it was decided that 1000 m² of existing deep basement should be used for squash courts (still to be fitted out) and parking was to be limited to 16 cars.

15 View east across the scheme with the unfinished speculative offices in Endell Street beyond.

16 Shops' service entrance to the basement from Shelton Street.



15



16



17 Pedestrian entrance from Shelton Street to the north-south route through the scheme, spanned by the third floor level access gallery. The stepped ramp bars the disabled.

18 The central route showing ventilation grilles to the basement, entrances to dwellings and landscaped areas.

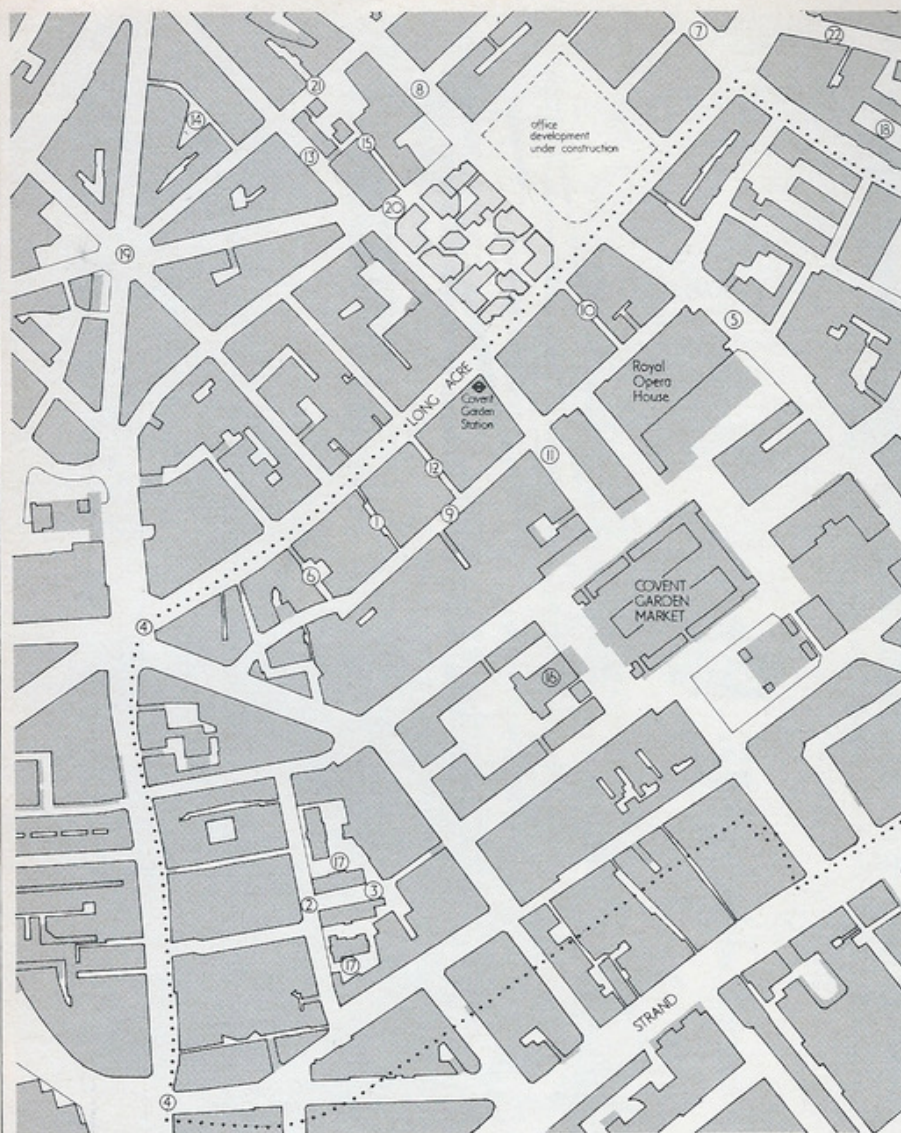
19 One of Covent Garden's real alleys: Hanover Place, south of Odhams Walk. While architecturally unprepossessing, its flat sides and floor make it feel safe and usable by the infirm. Its dullness does not inhibit the customers of Le Cafe des Amis du Vin who sit out in the summer. One can see from one end to the other. Entrances to premises are through doors directly off them: they are narrow streets without traffic. The routes into and through Odhams Walk are crooked, partly covered, partly open, are not streets and are not obviously for public use.



17

18





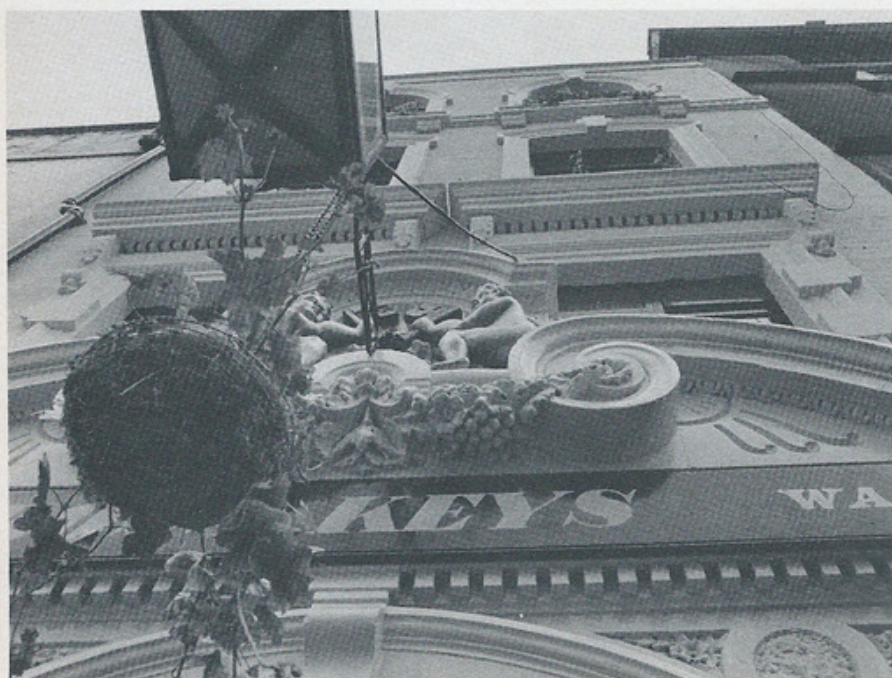
20

0 50 100 150m



Key

- | | | | |
|---------------------------|------------------|-----------------------------|---------------------------------|
| 1 Banbury Court | 7 Drury Lane | 13 Neal Street | 18 Peabody Estate (Wild Street) |
| 2 Bedfordbury | 8 Endell Street | 14 Neal's Yard | 19 Seven Dials |
| 3 Bedford Court | 9 Floral Street | 15 Nottingham Court | 20 Shelton Street |
| 4 Bedford Estate boundary | 10 Hanover Place | 16 St Paul's, Covent Garden | 21 Shorts Gardens |
| 5 Bow Street | 11 James Street | 17 Peabody Estate | 22 Wild Street |
| 6 Conduit Court | 12 Langley Court | (Bedfordbury) | |



21

When the fruit and vegetable traders left Covent Garden 10 years ago, the pattern of the district was still much as it had been in 1831, when the market was built, 20. There were streets lined with shops, with housing and commerce above, and fine warehouses. Neither the Bedford estate (to the south of Long Acre), nor the development of Seven Dials had, unlike the later estates of Georgian Bloomsbury, Mayfair and Marylebone, provided mews for servicing the interiors of the blocks. Instead, a series of regularly-pitched alleys runs north-south off Long Acre, and occasionally the hollow middle of a block, such as Neal's Yard, is a publicly accessible space—an outdoor room. Victorian building activities were confined to infilling, and to the construction of Peabody buildings like those in Wild Street and Bedfordbury, 23, 24.

Indefensible space

What has all this history to do with the housing at Odhams Walk? Not very much, unfortunately: neither the positive nor negative lessons of the past have been learned. The architects suggest that their design is derived from the character of the district. With one exception, that of height, this is not true, and its real concerns seem carried over directly from their earlier GLC housing scheme at Queensmere, Wimbledon (AJ 17.11.76), where the spaces between the stepped-section dwellings show the same interest in intricate, claustrophobic 'intimacy'. The real alleys of Covent Garden, on which those of this scheme might be supposed to be modelled (eg Nottingham Court to the north and Hanover Place, Langley, Banbury and Conduit Courts to the south and east) are straight, have flat sides and open ends, so that one can see from one end to the other, 19, 22. Entrances to premises are through doors directly off them: they are narrow streets without traffic.

The routes into and through Odhams Walk are crooked, 25, partly covered, partly open, are not streets, and are not obviously for public use, 26. They feel unsafe, and, if the present security patrol is withdrawn, will probably be unsafe: gated-off at night, more like arcades than alleys.

The organisation of the Odhams block, with neither fronts nor backs, and with its circulation on the inside, has resulted in the presentation of incoherent raw modern forms to the surrounding streets, 31, and no attempt has been made to consolidate the important corner to Long Acre and Endell Street, 30. The skyline is deliberately broken, and the street facades are crudely modelled, using meaningless storey-height recessions and projections (derived perhaps both from the casbah and Safde's Montreal Habitat, 35) in some places of one dwelling, in others two. The vertical surfaces of the surrounding streets are flat, with modelling and decoration of bay-windows or pilasters 0.5 m thick at most, and, where the buildings have no cornice, the occasional gabled flourish instead, 21. At Odhams Walk, commerce, tucked in uncomfortably under the overhanging housing, 27, 29, seems, in spite of its lavish underground servicing, 16, to have suffered from the organisation above: it will never be as inviting as the shops of the rest of Long Acre or Neal Street.

20 The pattern of Covent Garden. Neither the Bedford Estate (to the south of Long Acre) nor the development of Seven Dials (see key below plan) provided mews for servicing the interiors of the blocks, unlike the later estates of Georgian Bloomsbury, Mayfair and Marylebone. Instead a series of regularly pitched alleys run north-south off Long Acre (see 22). The access through Odhams Walk breaks this pattern (see 25).

21 A Covent Garden street front. The vertical surfaces of the surrounding streets are flat, with modelling and decorations of bay windows or pilasters, and where the buildings have no cornice, the occasional gabled flourish instead.

22 Langley Court, another of the alleys running between Long Acre and Floral Street, where the smell of fruit and vegetables has been replaced by that of Cow gum.

23 The simplicity of access to flats in this Peabody building in Wild Street has far more to recommend it than the complex inconvenient access arrangements for Odhams Walk.

24 The Bedfordbury Peabody building.

25 Ramped entrance to Odhams Walk from Long Acre, and the only one negotiable by a wheelchair.



23



22

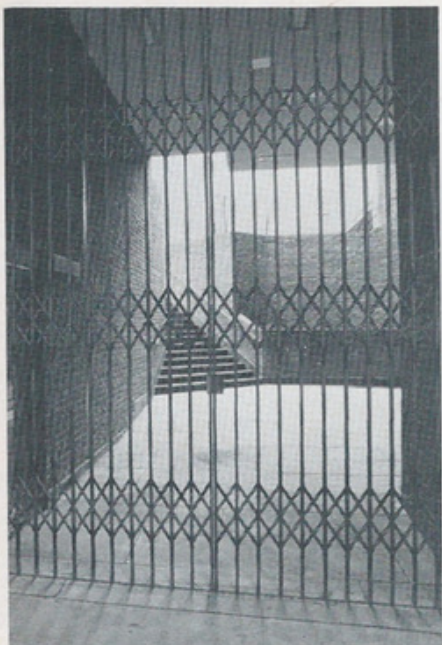


24



25

26



29



27

26 'The routes into and through Odhams Walk . . . feel unsafe and if the present security patrol is withdrawn, will probably be unsafe: gated off at night more like arcades than alleys' (Woodward). 'It would be a great pity if we were to give the vandals and muggers the satisfaction of dictating the form of the environment . . . we have people demanding nothing but straight passages as though to give a clear field for water cannon and rubber bullets' (Campbell).

27-30 Architecture versus the city: the destruction of street-surfaces and corners. The new Neal Street Shop and the pub opposite show how to do corners, 27. Odhams Walk shows how not to—at the disastrous junction of Long Acre and Endell Street, 29, 30.



28



30

Ignoring ground rules

Inside the block, the entire form has been crumbled, so that, although there is a large-scale diagonal symmetry, it is not legible: it is impossible to find one's way to a dwelling without a map, 32, 33 (in the casbah one uses human guides). Why can owner-occupiers be trusted to have their own front doors identified with only a street name and number, but those who rent have to be given an elaborate access-system, including the absurd and inconvenient third-floor access gallery, 37, and then a graphics system to explain it, 33? It is because the arrangement of access, and public and private space has not been thought through. The route from the street to the smaller dwellings on the upper levels is particularly irrational: having waited for it in a dingy corner, one must take the lift to the third floor, go along the narrow, crooked gallery which is partly open, partly covered, and then, finally, climb a flight of unprotected stairs to the front door, 34. This arrangement would not be a good idea in North Africa, and in drizzly London it offers less convenience than that of a routine Peabody building, 23. The architects seem to have inspected Covent Garden, seen only the cheerful chaos, and ignored the few simple ground rules that have allowed and supported it. It is ironic that the architects of a large public sector landowner, the GLC, have chosen to mimic the forms of individual private sector initiative rather than those well-mannered traditions, enforced by leases, of earlier estates such as the Bedford.

The standard GLC interiors of the dwellings themselves are reasonable, although the larger four- and six-person ones on the lower levels, nearly a third of whose living rooms face north, feel gloomy, and look as if they will not get enough of the recommended sunlight, if any at all. The London Building Acts were probably right in their insistence on ceiling-heights of 8ft; the new mandatory 2.3 m minimum (and it always is the minimum), does seem very low, as one tenant remarked to this reviewer (his only complaint). The dwellings' outdoor spaces—balconies and galleries—seem completely unusable for the sorts of activities shown in the artist's impressions, 3, 6. They are overlooked from all sides and levels, 41.

Landscaping of the scheme is unconventional and unsatisfactory, 37, 39; London's public landscaping tradition has been of the park and the square, using the plane tree to decorate the street, a tradition still heroically continued by the London Borough of Camden. Private landscaping has been confined to the back garden, the privet hedge and the window box (the latter gloriously magnified and geraniumed at the Barbican in the City of London). Carefully waterproofed places for plants are here filled with the ubiquitous sumac trees, 'ground cover', creepers, and other species that will grow while requiring no maintenance, but that still require authority to maintain them. They will be neither supplement to, nor substitute for, the decorative initiatives of the tenants, 39.

It can be shown quite readily that the 102 dwellings of Odhams Walk could have been arranged round the edge of the site, in two-storey houses on top of a platform of commercial and social uses facing the sur-



31



32



33



34

31 The vertical feature on the corner of Endell and Shelton Streets contains one of the pair of lifts.

32, 33 The collapse of Western urbanism: the 'graphics system' is left to explain what the architecture cannot. 'Apart from a commercial development in Endell Street, the surrounding buildings to the site are mostly former warehouses of brick on the back line of footpaths with alleys penetrating them. They equate to five or six storeys of present housing standards and have a serrated skyline' (the architects). 'There is no obvious model to follow; the eighteenth and nineteenth century facades show every kind of style and treatment and have in common only a roof level of some four to six storeys' (Campbell).

34 The smallest flats are at the top, reached by external stairs. The standard Peabody block at least provided covered access to each dwelling.



rounding streets (with, perhaps, the smaller dwellings placed as penthouses on top, reached by lift to their own private, covered access). Corners could have been used and filled out by commerce, and the central space, of some 30x55 m, used for private gardens, or the enclosed semi-public ones like those of the Ladbroke estate, or both. The citizen might therefore ask what the architecture of public housing has contributed to the long and well-understood traditions of London housing.

We shall never know the extent to which the collapse of architectural culture into silliness (when architecture can be characterised as out-of-the-ordinary, difficult to build, and likely to leak) may have assisted those who are determined to abandon a public housing programme. The paradoxical and self-defeating aping of 'architecture without architects' has been attempted: it is now time to try architects without (too much) architecture. Odhams Walk does not fulfil the promises of modern architecture for sun, air and green space, nor has it understood or explored its context: it asks us only to choose, in an invidious 'judgment of London', between 'architecture', 'housing', and the city. We need all three.

35 Safdie's Montreal Habitat; diagonal access routes, crumbled cubes. . . .

36 Through a telescopic lens the scheme almost begins to blend with its neighbours.

37, 38 Access gallery at third floor level. The crude concrete visible is to prevent the balcony walls being pushed over.

39 Official landscaping at right and private dwarf cypresses.



Appraisal 2

by Kenneth Campbell*

If this site had been developed by the LCC or GLC in the '50s it would probably have been designed as four-storey maisonettes over shops round the perimeter, with access balconies on the outside. In the '60s it would probably have been a 22-storey point block on a two-storey podium, both totally out of sympathy with their surroundings. As it is, Donald Ball, the architect responsible, has come up with a most ingenious and satisfactory answer, in an area where community feeling is most strong and at the same time most threatened—an urban village.

It lies almost exactly where the old warehouse and wholesale area to the north and west of Covent Garden meets the commercial and cultural area of the market itself, the shopping streets and the opera complex. There is no obvious model to follow; the eighteenth and nineteenth century facades show every kind of style and treatment and have in common only a roof level of some four to six storeys.

Since the dwellings look inwards towards their own environment, Ball has followed the former area, so the external facades tend to be austere but the austerity is lightened by considerable variation in the roof line and strong modelling, particularly at the corners. Various non-housing uses at pavement level will also enliven the exterior and it is perhaps unfortunate that this assessment of the scheme takes place when only one of these, a chemist's shop, is actually occupied. Others on their way are an old people's day centre, auction rooms, and workshops and studios for the Design Centre. Others are being negotiated. In the meantime the blanked-off shopfronts at this level don't help the external views.

As with the exterior, so the interior will contain several non-housing uses at ground floor level, including a health clinic, a children's nursery and shops, which, with their glazed fronts, usually on corners, will provide transparency and reflection where at present boarded windows deaden the view.

The classic village idiom of the closed vista turning to something else beyond prevails throughout, with the interesting result that the village seems larger inside than it does out. Naturally this is bound to raise the spectres of vandalism and mugging. Both kinds of violence are so repulsive that they have become an obsession, so much so that we have people demanding nothing but straight passages as though to give a clear field of fire for water cannon and rubber bullets. It would be a great pity if we were to give the vandals and muggers the satisfaction of dictating the form of our environment. One must believe that society will find ways of removing the sources of this problem long before our buildings decay.

In the meantime of course it has to be dealt with, and the City of Westminster, which leases the site from the GLC and manages it, has taken sensible precautions. In addition to a resident caretaker there is a 24-hour security control which takes over at night, when lateral passages can be closed off. At first sight the layout and the receding

* Kenneth Campbell joined the LCC in 1949, and was housing architect from 1959 until 1974.



37



38



39

terraces appear complex in three dimensions, but on short acquaintance one rapidly grasps the pattern. This is because the scheme is rigorously structured. It consists of two similar halves lying east and west of the north-south axis. Each half is composed of four units of six basic 'bricks'. The basic 'brick' itself, which is used throughout, consists of a rectangular two-person flat over an L-shaped four-, five-, six-person family dwelling. The roof of the stem of the L and the angle of the L provide large outdoor terraces to each dwelling.

This system provides a remarkably high level of privacy considering the high density. Compared with normal two- or four-storey perimeter terraced housing in which virtually all outdoor spaces are overlooked from all the dwellings, here not more than three or four of the terraces can be looked into from any one point even at the top level. Privacy is also helped by the planting, which is of the standard of quantity and quality that, in my experience, one always hoped for, designed for and showed on the plans but never achieved. Moreover it was there from the start. Knowing all the obstacles, objections and difficulties in the way, one can only admire the pertinacity that the architects must have shown in achieving this result. More astonishing still is that fact that, up to this moment, no trees have been lost through vandalism (nor by the way are there any graffiti) although the scheme has been open since early summer. Each terrace has a wide raised planting bed at one edge. Wherever there is a sheer wall below, the bed is placed on that side of the terrace. The sumac trees will give vivid colour in summer and autumn.

The dwellings themselves are to full Parker Morris standard. Their plans vary slightly according to their position in each unit. To anyone not used to council housing, or for that matter traditional cottages, the ceiling heights may appear low. Unfortunately no latitude was allowed by the DOE's rules on this—the 2.3 m height was, like all such rules and as Parker Morris himself foretold, both maximum and minimum. At least it reduces the volume to be heated.

Another regulation that will produce difficulties is the car parking. This is restricted to 16 places only in the basement service area to the shops—the result of the GLC's attempts to restrict cars in the inner city.

Taking the scheme as a whole, Donald Ball has clearly avoided some of the visual drawbacks associated with council housing at high density such as massive horizontal or vertical structures, with the individual dwelling totally subordinated to the block. He has achieved a domestic individual scale without recourse to sentimental pastiche or the now common layers of lean-to roofs. One can, as I say, criticise the external facades. In this respect it is interesting to see that the elevational drawings are misleading: they look more lively than the actual building.

Finally, let us consider the people who really matter. It is very much liked by the residents. Apart from the man who found the ceilings low—and he had no other complaint—they and the caretaker (a member of a normally unsentimental race) are enthusiastic. Even the local press could find no criticism. There are few housing schemes of which one could say half as much.

Schedule of accommodation

31 two-person dwellings (including warden's flat).
30 two-person old people's dwellings, average 49.37 m².
21 four-person dwellings, each 77.6 m².
12 five-person dwellings, average 88.2 m².
8 six-person dwellings, each 95.5 m².
Total floor area of housing: 6463.3 m².
£1 721 412.

Commercial development comprises 4857 m² of immediately lettable space, and deep basement of 1052 m² available for future development as squash courts:
£1 039 558.

Total tender cost of development: £2 761 000.

Summary

Total habitable floor area: 6463.3 m².
Type of contract: selective competitive tender (JCT Form (LA-GLC) (Clause 31F applicable)).
Tender date: February 1977.
Work began: May 1977.
Work finished: August 1981.
Price of foundation, superstructure, installation and finishes including drainage to collecting manhole: £1 562 530.
Price of external works and ancillary buildings including drainage beyond collecting manhole: £158 882.
Total: £1 721 412 (housing only).

Summary of element costs

	Cost per m ² £	Per cent of total
Preliminaries and insurances	37.30	15.42
Contingencies	5.85	2.42
Work below lowest floor finish	24.45	10.11

Structural elements

Frame	7.22	2.99
Upper floors	22.74	9.41
Roof	13.02	5.39
Staircases	5.29	2.19
External walls	15.55	6.43
Windows	6.06	2.51
External doors	1.36	0.56
Partitions	7.60	3.14
Internal doors	8.36	3.46
Ironmongery	2.70	1.12
Total of structural elements	89.90	37.20

Finishes and fittings

Wall finishes	6.74	2.79
Floor finishes	5.59	2.31
Ceiling finishes	2.19	0.91
Decoration	4.27	1.77
Fittings	4.38	1.81
Total of finishes and fittings	23.17	9.59

Services

Sanitary appliances	2.96	1.22
Waste, soil and overflow pipes	5.54	2.29
Cold and hot water services	11.18	4.62
Heating services	12.35	5.11
Ventilation services	0.53	0.22
Gas services	1.08	0.45
Electrical services	13.45	5.56
Special services	7.33	3.04
Drainage	6.66	2.75
Total of services	61.08	25.26

Total	241.75	100.00
-------	--------	--------

External works £158 882

Cost analysis

All costs per m² based on tender (housing only).

PRELIMINARIES AND INSURANCES £37.30
This element is 15.42 per cent of the remainder of the contract.

CONTINGENCIES £5.85
This element is 2.42 per cent of the remainder of the contract.

WORK BELOW LOWEST FLOOR FINISH £24.45
Rc columns supported on pad bases, rc retaining walls.
Rc beams spanning retained existing deep basement (25 per cent of area) with columns rising therefrom.
305 mm in-situ concrete bed 75 per cent site.

Structural elements

FRAME £7.22
Reinforced in-situ concrete columns and beams—columns at 5.2 m typical centres.

UPPER FLOORS £22.74
293 mm rc hollow clay blocks floor, 1283 m².
£19.46/m²; 306 mm ditto, 6064 m²: £20.12/m².
Total upper floor area: 7347 m².

ROOF £13.02
293 mm rc hollow clay block roof, 998 m²: £19.46/m².
306 mm ditto, 2658 m²: £20.12/m².
Finish: 70 mm (av) cement and sand screed, 20 mm two-coat asphalt, 50 mm insulating roof board, 50 mm gravel topping, 1210 m²: £9.30/m².
Total roof area: 3656 m².

STAIRCASES £5.29
2 number stair towers, grano finish on in-situ concrete treads and landings. Two-coat plaster walls. Total rise: 7.98 m. Width overall tread: 1.10 m.
39 number individual external precast access stairs to dwellings with precast tread and riser unit cappings. Total rise: 2.6 m. Width overall tread: 1.10 m.
Both above have 42 mm diameter galvanised mild steel handrails fixed to walls.

EXTERNAL WALLS £15.55
Stock brick outer skin; 100 mm cavity with stainless steel ties and 100 mm aerated concrete thermal internal skin, 5100 m²: £19.71/m².

WINDOWS £6.06
497 number timber pivot hung; 26 number timber top hung; 18 number fixed lights; 780 m²: £50.19/m².

EXTERNAL DOORS £1.36
44 mm softwood two-panel doors, glazed, with weather bars, 102 number front doors, 86 number patio doors, in singles and pairs.
Timber frames softwood with iroko thresholds.
Number of doors: 188.
Total external door area: 287 m²: £30.74/m² av.

PARTITIONS £7.60
170 mm Calculon brick wall, 2008 m²: £10.56/m².
60 mm aerated concrete block wall, 6379 m²: £4.18/m².
12 number timber glazed screens (five-person dwellings), 47 m²: £26.36/m².
Total partition area: 8434 m².

INTERNAL DOORS £8.36
40 mm primed hardboard-faced room and cupboard doors, 44 mm primed hardboard faced 1/2-hour fire-resistant room doors, timber frames; 1741 m²: £31.02/m².
Number of single doors: 982.
Number of double doors: 164.
Total internal door area: 1741 m².

IRONMONGERY £2.70
Standard fittings of anodised aluminium finish.

Finishes and fittings

WALL FINISHES £6.74
13 mm two-coat plaster, 20 008 m²: £1.94/m².
White glazed wall tile splashbacks, 194 m²: £10.82/m².
Quarry tiles on screeded backing (refuse area), 240 m²: £11.30/m².
Total wall finish area: 20 442 m².

FLOOR FINISHES £5.59
12 mm polystyrene sound/thermal quilt, 38 mm reinforced cement and sand trowelled screed, vinyl floor tiles, 15 mm x 71 mm softwood skirtings, 5644 m²: £6.22/m².

Quarry tiles with coved skirting on screeded bed, 80 m²:
£13·13/m².
Total floor finish area: 5724 m².

CEILING FINISHES £2·19
13 mm two-coat plaster, 5724 m²: £2·30/m².
Three-coat Tyrolean finish, 252 m²: £4·01/m².
Total ceiling finish area: 5976 m².

DECORATION £4·27
Plaster walls and ceilings: preparation and two coats emulsion paint.
Woodwork (internal): preparation, one undercoat and one finish hard gloss oil paint.
Woodwork (external): preparation, two undercoats and one finish hard gloss oil paint.

FITTINGS £4·38
Prefinished standard kitchen fittings and laminated worktops. Slatted shelving to linen cupboards.
Blockboard shelving to store cupboards.

Services

SANITARY FITTINGS £2·96

	No	Quality or material
Bath	102	Pressed steel
Washbasin (cloaks)	41	Ceramic
Washbasin	102	Ceramic
Low level wc suite	112	Ceramic (plastic cistern)
Sink top (single drainer)	102	Stainless steel

WASTE, SOIL AND OVERFLOW PIPES £5·54
Copper traps and wastes from fittings connecting to cast iron soil and vent pipes. Copper overflows.

COLD AND HOT WATER SERVICES £11·18
Galvanised mild steel main water service riser and copper connections to fittings.
Storage capacity of tanks: 227 litres (header tank: 45 litres).
Number of cold draw-off points: 459.
Copper flow and return from individual central heating boiler—pumped hot water circuit—copper indirect cylinder, thermal jacket, hot water temperature limiting device.
Number of hot draw-off points: 347.
Includes builders' work at £2·02/m².

HEATING SERVICES £12·35
Individual freestanding balanced flue boiler (gas-fired) pumped circulation controlled by time switch and thermostat.
Total heat load average 10 kW per dwelling.
Includes builders' work at £1·60/m².

VENTILATION £0·53
41 number limited time light-operated extract fan and plastic duct from internal wcs.

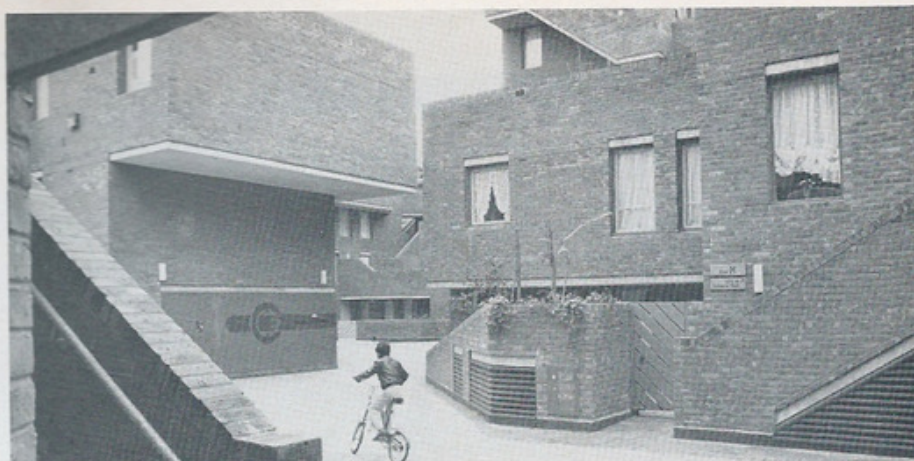
GAS SERVICES £1·08
15 mm gas service to 102 number cooker points.
22 mm gas service to 102 number central heating boilers (includes test certificate).
Total number of outlets: 204.
Includes builders' work at £0·44/m².

ELECTRICAL SERVICES £13·45
Normal domestic installation with black enamelled steel conduit; cooker control units; tv aerial points and telephone conduit provision. All tungsten light fittings.

Breakdown of electrical services	£/m ²
Sub-main installation	1·54
General installation	6·88
GPO installation	0·68
Tv installation	1·15
Old people's alarms (30 number)	0·59
Builders' work	2·61
Total	13·45

Total number of lighting outlets: 1227.
Total number of power outlets: 1320.
Total electrical load: 102 × 60A.

SPECIAL SERVICES £7·33
2 number lightning conductors—roof termination, and 2 number down tapes (£0·94/m²).
2 number eight-person lifts serving ground to third floors, rise: 9·64 m; speed 0·50 m/s (£3·82/m²).
2 number refuse chutes, third floor to basement with 15 number landing entries; metal extension chutes at base (£0·55/m²).
Fire mains: dry riser installation (£2·02/m²).
Includes builders' work at £0·54/m².



40 Streets and houses might have been easier to build.

DRAINAGE £6·66
Cast iron suspended drainage 100 mm and 150 mm diameter with cast iron suspended inspection chambers.

TOTAL PER M² OF HABITABLE FLOOR AREA: £241·75
£1 562 530 (net cost excluding external works)
6463·3 m² (net habitable area)

EXTERNAL WORKS
Private patios: 70 mm average cement and sand screed, 20 mm two-coat asphalt, 50 mm insulating roof board, 50 mm precast concrete paving flags laid dry.
Public access balconies/walkways: 70 mm average lightweight screed and all as previous item.
Brick planters: Two-skin one-brick walls (one-skin faced) lined with three-coat asphalt, 50 mm insulating roof board and hardcore, glass fibre quilt, top soil fill.
Cleaning site, removing retaining struts to basement retaining walls, underpinning existing retaining walls, constructing new retaining walls. Connections to mains services—electric, gas, water including hydrant main for ground floor deck. Estate lighting and signs.
Bench seats, landscaping using trees and shrubs to all private and public planting pits/boxes.
£158 882 (£1558 per dwelling).

Cost comment

The site occupies an important position in an area of central London where it will obviously attract considerable attention. The development is mixed, comprising housing, welfare and commercial facilities. It is perhaps not immediately apparent that the stipulated density of 472 persons per hectare (ppha) has been achieved, even though 43 per cent of the building area is not residential.

There are 102 dwellings in the scheme (of which 60 are two-person flats: pairs of these normally fit over a larger family flat) in eight separate blocks containing 12 or 13 units each. The mix of flats is important since two-person flats can be 20-25 per cent more expensive, when expressed in terms of cost per m², than the larger four- or five-person flats. Nevertheless the total overall housing cost of £241·75/m² is a substantial amount. There are reasons, however, completely unrelated to architecture or specification, that partially account for this.

● Covent Garden is an expensive area in which to build; it attracts the maximum percentage addition to the Housing Cost Yardstick.

● To harmonise with existing properties and to reach the required density, multi-storey development was inevitable.

● The variable mix and size of flats and the differing number of storeys reduces repetitive work.

● The high incidence of two-person flats increases the average area provided for each person.

● The cost is based on net habitable area rather than gross floor area.

In February 1977 the tender of £2·76 million was obtained on a fluctuation cost basis with formula adjustment. Work commenced on site three months later and took over four years to complete. It is interesting to note that building costs increased by approximately 75 per cent over that period and an updated tender would probably reflect a similar increase, inflating the housing cost to over £420/m² in present day terms.

The site included a deep basement in which it is hoped a squash complex can be created. The cost of work in existing and new retaining walls is apportioned between the building and external works.

The roof is an 'inverted' type and the section does not include the cost of roof pavers nor does it include any structural supports to the roof slab, so a total element rate is unavailable. Note the area of upper floor which comfortably exceeds the habitable floor area and forms balconies and outside areas, etc.

Exterior walling to net habitable floor area of 0·95:1 reflects the complexity of layout, but the low window to wall ratio reduces the impact of this element. Finishes are typical, domestic and inexpensive, and fittings are limited to kitchen units and cupboard shelving.

A breakdown of cost among the primary elements shows a greater emphasis on the services element than in many housing schemes. This is particularly due to the special services section which contains items not always required on low storey work. Hot and cold water services seem expensive, though the reason for this is not readily apparent. Each dwelling has its own boiler and tank. The heating installation cost based solely on an average cost per m² of floor area is £610 for the two-person flat and £1090 for the five-person unit.

Special services include two lifts and a dry riser fire main.

Site works account for just over 10 per cent of the building cost and work out at £1550 per dwelling.

The non-residential portion of the project is not analysed but cost a total of £1·04 million at a rate of £176/m² including a large area, 1052 m², of existing basement available for future development.

Energy comment

by Derek Poole

Our increased knowledge of daylighting and sunlighting buildings has made it possible to explore a very different geometry from the more traditional urban housing, but one must not be misled into thinking that conforming to the planning sunlitening and daylighting indicators is the panacea. Just adequate daylight and a minimum of an hour's sunlight in spring and autumn really is the minimum, and far less than a desirable requirement.

This development demonstrates some compliance with the indicators but it is not complete, as Chris Woodward notes; a third of the living rooms face north and are gloomy. Even on an urban site it is possible both to take advantage of sunlight and provide good daylighting; it is even possible to make use of sunlitening in a passive or active way. To achieve these advantages it is not necessary to have the complexities of Odhams: traditional forms of urban housing development will do. Even without any consideration of orientation and ambient energy, the Odhams design, with its increased envelope area, will have a greater thermal loss than the traditional Peabody or its successors.

It is also disappointing that the degree of thermal insulation is only that required by the Building Regulations at a time when many design teams have sought to better the statutory requirements. Values of between 0.3 and 0.5 W/m²°C have been common for some time now.

U-values

External walls	1.00 W/m ² °C
Roof	0.60 W/m ² °C
Floor	1.00 W/m ² °C
Partitions and internal walls	0.50 W/m ² °C
Glazed areas	5.70 W/m ² °C

Examination of the construction details shows some risk of cold bridging, particularly around windows and where the floor becomes external patio. The patio walls and walls to planting areas also bridge the roof insulation and so could be a source for interstitial or even surface condensation. Heating is by individual gas boilers, serving a radiator system with thermostatic valves and a thermostatically controlled hot water cylinder. It is curious that the thermostatic valves alone are expected to isolate the heating system during the summer. No mention is made of any device for balancing pressures in the system, so 'pumping over' may occur through the open vent when all the radiators are off. This will not only waste energy but will introduce air into the system and thus shorten the life of many components. The only other control specified is a time clock.

The possibility of district heating was not considered. This is curious because in a development of this size it would surely be an economical proposition, as well as giving future flexibility in the choice of fuel. Although local authority housing is constrained by many regulations and costs, real and imaginary, there are enough imaginative examples to demonstrate that



41, 42 All the private terraces are overlooked from the third floor access gallery.



the mundane need not be the norm. So, with this development, it is a pity that a greater understanding of the science of environmental design has not been possible, since this would surely have freed the designers from rigid rules and possibly helped bring about through other means the result that they were seeking.

Contractors

Main contractor: G. E. Wallis & Sons Limited.
Subcontractors: Mechanical Young Austen & Young Ltd.
Electrical Holliday Hall Ltd. Timber windows Hollis (London) Ltd. Aluminium windows, glazing & cladding Archital Luxfer Ltd. Metal louvers Crittall Construction Ltd. Kitchen furniture Ever Tidy Kitchen Cabinets Ltd. Collapsible gates Shutter Doors Ltd. Roller shutters & steel fire-resisting doors, electrically operated grill Dennison Kett Doors Ltd. Thermoplastic tile flooring H. & F. Badcock Ltd. Smoke outlet panels Luxcrete Ltd. Lifts Bennie Lifts Ltd. Lightning protection R. C. Cutting & Co Ltd. UHF/VHF communal aerial system Imhofs (Retail) Ltd. Refuse compactors Shelvoke & Drewry Ltd. Indication signs Burnham & Co (Onyx) Ltd. Facing bricks (Crosborough multi-stock) Redland Bricks. Refuse chutes True Five Ltd. Expansion joints Radmat (London) Ltd.

Odhams Walk

at Long Acre, Covent Garden, London WC2

for Greater London Council
by Department of Architecture & Civic Design, GLC

architect to the council Sir Roger Walters
succeeded by Peter E. Jones

design team Donald Ball, Matt O'Connor,
John Watts, Steven Groak

quantity surveyor to the council H. S. Page
succeeded by M. N. Withers

project qs B. S. Goodyear
director of mechanical and electrical engineering
P. C. Hoare

structural and drainage engineer Oscar Faber
& Partners

group landscape architect George Slater
job landscape architects Hilary Hams, David
Comben.

PHOTOGRAPHS BY RICHARD DAVIES EXCEPT
3, 6 BY GORDON CULLEN; 5, 32, 33 BY GLC;
35 BY J. M. RICHARDS; FRONTIS TOP RIGHT,
MIDDLE LEFT, BOTTOM RIGHT BY DAN
CRUICKSHANK.