

## Moscow Tackles the Problem GLC Delegates' Report

A picture of Moscow as a city with a tremendous housing problem, producing houses at the rate of 100,000 a year using factories and equipment on a 'stupendous' scale is presented in the report of a GLC delegation which returned from Moscow on 20 September. The report was presented to the GLC housing committee on 29 September by the chairman, Mrs. Evelyn Denington, who headed the delegation. The city, says the report, has a target of 1½m. homes by 1980, and is determined to achieve it even if it means some sacrifice in monotony and in finishes and equipment. The Moscow authorities make no effort to conceal the shortcomings, but have the techniques and determination to overcome them in time.

Presenting an overall picture, the report points out that before the war and for the first few years after, there was a desperate shortage of housing in Moscow and conditions were far worse than anything known in this country in the present century. In the last ten years far more attention has been paid to housing and a great deal of the city's resources have been devoted to the production of dwellings in very large quantities. Practically the whole of this production is by industrialised building methods, and the city is now producing houses at the rate of roughly 100,000 a year. It produced 90,000 last year and this year it hopes to produce 115,000.

During the period between now and 1980 the aim is to produce 1½m. dwellings and there is every indication that the city will be successful in achieving this figure. By that time they estimate that every person in Moscow will have an adequate amount of living space. The city has abandoned the idea of satellite towns and decided some years ago to solve its own housing problem within its own boundaries. It is in the fortunate position of having an ample supply of land to enable it to achieve housing production on this scale whilst still leaving room for an adequate Green Belt and for green wedges running into the centre.

### CITY COUNCIL'S POWERS

All building work within the city is under the complete control of the city council. The design and construction of housing, schools and other similar buildings are controlled by one of five deputy mayors. He is at the head of a vast organisation which includes some 11,000 architects, engineers, planners, heating experts, administrators, etc., and some 74,000 manual workers.

Planning and design are controlled by

the city architect who has a large central organisation comprising professional and technical experts of many kinds and also a district atelier for each of Moscow's 17 districts. These 17 districts are part of the city council organisation for all purposes. Subject to overall direction from head office each of these district ateliers does all the design and layout work for council projects within its own area.

So far as production is concerned, the construction complex controls 100 factories of various kinds producing materials for building on over 4,000 different sites, not all of which, of course, are housing sites. Some of these factories produce floor coverings, window frames, sinks, baths and other components for inclusion in the flats whilst others produce only pre-fabricated concrete components.

The factories producing concrete components are of two main types; one type manufactures various kinds of components often with some degree of specialisation, for example, one factory may concentrate on the production of load-bearing slabs for roofs and walls while another may concentrate on producing lighter weight slabs for internal partitions. The second type of organisation is responsible for producing all the components for a flat and also for erecting them, although production may be spread over several factories under a single control. The largest factory dealing only with manufacture produces the equivalent of 25,000 two-roomed apartments each year, but the largest organisation covering both manufacture and erection produces and erects 16,000 dwellings a year.

### LAYOUT AND DESIGN

Production on this enormous scale must inevitably lead to some monotony in design and layout, although the appearance of the estates was better than might have been expected. The dangers of monotony are well appreciated and the universal five-storey block of a few years ago has now been replaced by a mixture of heights —5, 9, 12 and 16 storeys with 20-storey blocks to come. Blocks of 20-storeys or more will be used sparingly to give architectural effect. The average density is about 140 persons per acre.

All these blocks are, however, assembled from cladding units of very similar appearance, and since most plans are two dwellings deep, the orientation cannot vary more than a few degrees. Nevertheless, the improvement in the last few years is certainly marked and, judging from the models of projected schemes, is continuing.

The floor space allowed per person is 9 sq. metres (about 90 sq. ft.) and this includes bedrooms and living rooms. They allow about another 54 sq. ft. for kitchen, bathroom, wc, storage and circulation. For comparison our figures for flats are approximately 105 and 65. However, it is assumed that the living room will often be used for sleeping purposes.

### CONCLUSIONS

Among its interim conclusions, the report says that the scale and mechanical equipment of their housing factories are stupendous, and providing the sites are available, it is obvious that their targets can only be hit by these means. The machines for continuous production and curing of concrete units are obviously very expensive and can only be justified by a very large output. It is doubtful if London could ever develop production on such a vast scale, and it would be necessary to concentrate the whole of the construction work of the GLC, ILEA and the London boroughs into a single organisation in order to provide scope for output on this scale. Even on a much smaller scale a very high degree of skill on the part of the architect is called for in order to avoid the ever present danger of monotony.

Some of the largest firms of building contractors in this country, in the opinion of the delegates, could benefit from a study of the production methods in Moscow, but only if they could be assured of a sufficient output over a period of several years in order to justify the initial expenses of providing and equipping the factory.

Many of the ideas developed in Moscow could be used to advantage in the council's own industrialised building factory at Woolwich. Great care would be needed in deciding on the composition of the team responsible for organising the work. It should include not only architects and civil engineers, but also production experts with a knowledge of assembly line techniques and the programming of production. As soon as the firm which will collaborate with the council on this scheme is named this should be one of the first problems to be discussed.

### DISTRICT HEATING

#### Sunderland Scheme as an Example

Lord Robens, chairman of the National Coal Board, speaking at the inauguration of a scheme under which the Board provides the heat from a new £90,000 boiler house to Sunderland Corporation's £3½m. Gilley Law Housing Development, advocated the use of coal-fired district heating plants to serve major new housing developments. He said that if projects were within 50 miles of a coal field, and if in the early stages consultation was sought with the National Coal Board, district heating schemes would be more efficient and economical than those based on other fuels.

The development at Sunderland is in seven blocks of 16-storey flats and 35 of three storeys, comprising nearly 1,000 units. At a Press conference, Lord Robens said estimates showed that the cost of heating a two-bedroomed dwelling at Gilley Law would be about 12s., and for a four-bedroomed house 20s. a week.