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100 YEARS OF SOCIAL HOUSING IN VIENNA

INTRODUCTION

“Vienna is different”. For years this has been the logo of the city of Vienna. It seems that for no other part of the administration this is so correct as for Vienna housing. Vienna’s social housing originated from an internationally acknowledged reform programme in the 1920s and has been developing for eighty years. 60 % of all Vienna households live in subsidised apartments, including 220,000 in council housing. Today nearly 1,7 million inhabitants live in Vienna.

Therefore, continuities and changes in the history of Vienna social housing have to be investigated: starting with the housing situation in the capital of the Habsburg Empire which offered to most of its residents incomprehensible poverty rather than glory and fortune; via the revolutionary self-help movement of the ‘Vienna settlers’ after the collapse of the monarchy, their demand for a self-determined life and housing in democratic communities. Following this movement ‘Red Vienna’ emerged as the world’s first metropolis governed by Social Democrats which built ten thousands of *Gemeindewohnungen* (council houses) for the weakest strata of the population in spite of very severe economic conditions, and thereby developed radically new urban qualities.

After break during fascism and war Vienna proceeded with public housing. The general understanding that housing should not be fully left to the free market has formed the basis for reconstruction, new housing, industrialised housing production, and last not least ‘soft’, i.e. residents-oriented urban renewal. For this purpose the municipality has established legal, financial and administrative instruments; important conditions, concerning for example infrastructure, are defined and financed by the municipality in advance, and a similar approach is taken concerning the architecture. Housing is always seen in connection to city planning.

At the same time residential housing must further be developed. Globalisation and new media influence the society and bring up new challenges. With experimental *Themensiedlungen* (theme-oriented settlements) the city tries to set incentives: ecological

housing estates, traffic free housing estates, gender mainstreaming in planning, new forms of living and working, and integrative projects. Many of these experiments are later transferred to normal housing projects. Tenders are to improve the quality and at the same time to reduce costs. Last not least innovative architecture is subsidised. That this can be attractive for architects as well is proven by an impressive list of international 'stars' who participated in housing projects or are involved in current projects: Adolf Loos, Josef Frank, Margarethe Lihotzky, Josef Hoffmann, Richard Neutra, Gerrit Rietveld, Peter Behrens in the past; and currently – only to mention some of them – Jean Nouvel, Coop Himmelb(l)au, Herzog & de Meuron, Zaha Hadid, Norman Foster, Harry Seidler.

VIENNA IN THE LATE NINETEENTH CENTURY – DREAM VERSUS REALITY

At the end of the nineteenth century Vienna, as a residence city of the imperial court and – together with Budapest – the capital of an empire of fifty million, had reached its zenith in urban development. Within fifty years the city had grown from about 400,000 to more than two million inhabitants. The majority of the immigrants came from the eastern crown lands of the monarchy. The economic development following the rise of the bourgeoisie after the 1848 revolution led a gigantic urban reconstruction. The demolition of the old city walls which had separated Vienna from its suburbs was followed by the glamorous construction of the Ringstrasse boulevard with its historic buildings, which expressed the demand of the new bourgeoisie for representation and for its own history. Built first for strategic reasons the new city railway net offered an efficient public transport system. At the same time a generous construction of technical infrastructure, which in some cases is sufficient until today, was started. At the end of the nineteenth century the *Sezession*, Vienna's variant of *Jugendstil*, rebelled against historicism. It gave the capital of the Habsburg Monarchy a last glamorous highlight, which was accompanied by great achievements in the arts and in sciences. Historicism and Jugendstil have marked the image of the city until today.

Still, there was another Vienna, which a visitor passing by would hardly notice: the poverty in the suburbs, where immigrants from the eastern regions of the empire concentrated. It is true that the city under the populist Christian Social (conservative) mayor Karl Lueger pushed through an extensive infrastructure programme after 1895; but social politics, being understood merely as a poverty relief programme, were almost non-existing. And in no other area this became more obvious than in housing.

With few exceptions housing was exclusively left to private capital. Other than in a city like Berlin in Vienna thousands of small landowners became now landlords by using bank loans.

The state renounced each form of interference into tenancy contracts; rents could be increased at any time. One-month contracts were common for workers' households making a large part of the population nomads. In spite of an enormous housing construction volume the housing shortage was horrible: "There are people who miss the glorified good old times. Let us speak to them in numbers: The city's asylum accommodated 64.222 persons or 3,28 % of the total population, including 7,058 children, in 1910. In 1912 the number of sheltered people was 96,878, including 20,071 children. The municipality left the main part of this social welfare to the initiative of the private asylum association that accommodated 461,472 persons, including 29,915 children, in 1913." (*Die Wohnungspolitik der Gemeinde Wien*, 1929)

At the turn of the century no less than 95 % of all the apartments disposed of neither WC nor water installation and consisted of a kitchen and one room. Often more than 10 persons lived in such a tiny flat, and additionally beds were let to strangers during the night or during the day to be able to pay high rents. Outside these tenement buildings imitated the Renaissance facades of the Ringstrasse palaces: the architect Adolf Loos called them 'Potemkin City'. Compared to the rest of Europe the standard of housing in Vienna was the worst. This could not remain without consequences for the health of its residents – not accidentally, tuberculosis was also called 'Vienna disease' internationally. At least this situation led to the first fixation of a maximal building density of 85 % in the 1883 Vienna building regulations. The housing misery became also a political issue and resulted repeatedly in turmoils. In 1914 the Social Democrats demanded in their Municipal Programme to construct public housing estates, to introduce earmarked taxes for this purpose, and to acquire land. This was prevented, however, by the existing suffrage, which allowed not more than 53.948 male persons with high income to participate in elections, ensuring the Christian Social Party a comfortable majority.

The first important state intervention into housing issues took place during World War I. To avoid an increasing number of evictions soldiers' families a tenants' protection law was introduced in the Austrian part of the monarchy in 1917, limited until December 31, 1918. This law excluded evictions and rent increases, and in substantial parts is valid until today. In connection with the high inflation it led, however, to an extensive devaluation of the rent income and accordingly to an end of private rental housing construction in Austria after the World War I.

THE VIENNA SETTLERS' MOVEMENT: GRASSROOT HOUSING REFORM

The collapse of the monarchy brought a wave of refugees from Eastern Europe and increased the housing shortage; on the other hand, a revolutionary atmosphere prevailed, which evoked a radical squatter movement unique in Europe: “The freezing and hungry people occupied Vienna’s suburbs without respecting ownership. The workers started to cultivate the soil around the cities and the industrial areas to grow vegetables and breed small livestock. The eight-hour working day gave a new impulse to this movement; thousands used the new spare time to work in allotments. Thus Vienna became gradually encircled by 60,000 allotments. The housing shortage pressed further. The users of the allotments started to build cabins in their gardens. The settlers’ movement finally emerged from such isolated attempts (...). Gradually the initiative of the masses grew to an entire system of non-profit building activity. The settler cooperatives built blocks of houses, which consisted of single-family dwellings (...). The state and the city covered the lost building costs. The entire movement is remarkable in many respects. Its origin, initiated by the masses, shows their creative activity which was roused by the revolution.” (Otto Bauer, *Die Österreichische Revolution*, 1923)

The city of Vienna, confronted with petitions from settlers’ organisations and several demonstrations with up to 100,000 participants, finally offered its support. Mayor Jacob Reumann, standing on a simple wooden table in front of the City Hall, promised the purchase and development of land, the supply of building materials and professional assistance. The city established its own Siedlungsamt (municipal settlement office), and the city-owned GESIBA – later to become an important housing developer – distributed building materials. Cooperatives founded their own workshops, for example for the production of bricks and windows.

However, the issue was not simply housing: “From the very beginning the cooperative had determined to equip the settlement with relatively numerous cultural and social facilities (...). Contrary to the justified demand for a quiet and private dwelling which ensures a wide margin for the development and enrichment of individuality, it was necessary to offer many communal facilities to achieve a proper balance and harmony of individual and social emotions. A cooperative house is the heart and the brain of a settlement, a town hall, a recreation area, a club, a theatre, a concert hall, an adult education centre at the same time. Here grows the restricted feeling of an allotment user and an owner of a single-family house into a social, common and significant ideology. Here the isolated become an emotional community. The settlers’ ideology as a social category will be born here and will effect the entirety and its parts. Here is the seat of a freely elected administration, of political battles, of the spreading of knowledge, of artistic experience and of celebrations. And a major part of

the spirituality of the Vienna settlers' movement is revealed in such a centre which almost all settlements put into the middle of their hopes." (*Das Genossenschaftshaus der Wiener Rosenhügelsiedlung und sein monumentaler Bilderschmuck*, n.d., p.16)

Prominent artists took part in the interior design of cooperative houses; the construction was partly financially supported by an American Quaker Organisation.

Settlers had to work on the site themselves, mostly 2000 hours per house; however, the settlement, including communal facilities, was completed first, then separate houses were distributed by lot. The technical and architectural quality of these nearly 15,000 terrace houses in fifty settlements is amazing. Adolf Loos, for some time chief architect of the Vienna Settlement Office (*Siedlungsamt*) collaborated substantially in teaching the cooperatives. He could partially realise his terrace house project called 'House with one wall', consisting of horizontal slabs with non-supporting front elements made of substitution building materials, in the Heuberg estate. For such a simple terrace house his collaborator, Margarethe Lihotzky, sketched what was presumably the world's first built-in kitchen which she later developed into the famous 'Frankfurt Kitchen'. Josef Frank, coming from the Austrian Werkbund, also planned several settlements in a very rationalistic style. As a result, the Vienna settlers as a true grassroots movement anticipated in many ways what later attracted worldwide interest: the housing policies of 'Red Vienna'.

RED VIENNA

After the collapse of the Habsburg monarchy and the introduction of a universal, equal and direct suffrage replacing the former suffrage, which had reserved the right to vote to individuals with high taxable income and had thereby favoured the Christian Social 'landlords' party, the Vienna Social Democratic Party achieved an absolute majority of 54.2 % on May 4, 1919. Unlike in national elections the Social Democrats could even improve this result in Vienna until 1934, the end of the democracy in Austria, and gained more than 60 % of votes in 1927. In 1945 the Social Democrats won again an absolute majority in the first free elections after the fall of fascism, and they hold this position also today. To introduce the social-democratic reforms it was necessary to gain independence of the national tax legislation, as Austria was ruled by conservative parties after 1920. This tax sovereignty, providing the city with a budget for its ambitious reform programme, could be achieved after the foundation of an own *Bundesland* (Province) of Vienna, on January 1, 1922. 'Red Vienna' had thus become possible.

In its importance this development exceeded the boundaries of Austria. At this moment Vienna was the only metropolis in the world with a social-democratic municipality; the implementation of a left-wing reform policy could be tested here for the first time. On the other hand, the ideology of 'Austro-Marxism' was strictly based on the principles of a parliamentary constitution aiming at achieving a comprehensive change of society in a democratic way – in spite of the revolutionary mood in the Austrian labour force, and contrary to the Marxist regimes in neighbouring Bavaria and Hungary. Not surprisingly, this created considerable international interest.

In fact, impressive reform activities were carried out between 1919 and 1934. In addition to economic measures such as modernisation and establishment of public enterprises reforms included the introduction of strongly progressive taxes, as well as the development of educational, care and health institutions. Housing, however, should become the key issue of the new government. Here, in day-to-day life the difference between capitalistic 'usury' and socialist municipal politics should be experienced by everyone. Housing should be more than a simple dwelling, the *Gemeindebau* (council housing) becoming the nucleus of the new society. It therefore included a wide variety of infrastructures – education, health, and culture – that could be seen as a first realisation of a social Utopia. As the capitalistic society could not be overthrown, the task was to show what a socialist society was able to achieve: "... big cities are able even in a capitalistic society to carry out a considerable piece of socialist work. A social democratic majority in the City Council can also show in a capitalistic state what creative power is inherent in socialism". (Robert Danneberg, *Das neue Wien*, Vienna 1930, p.10)

This anticipation of New Vienna in council housing conformed to the political morale of Austro-Marxism. Housing estates became a symbol of power, which to some extent can still be traced today: The 'right to its own history' of the labour class was documented by estate names (Marx-, Engels-, Adler-, Bebel-, Liebknecht-, Matheottihof etc.). Architecture served as physical expression of this social Utopia which is best symbolised by the numerous communal facilities, by the courtyards serving as communication areas, and last not least by the architecture itself.

Naturally, financing remained the vital question in the social housing. Since the old rent tax and the land value tax did not bring enough income anymore as a result of the hyperinflation, new taxes had to be introduced. This was facilitated by the new tax sovereignty of Vienna starting in 1922, as the Social Democrats in the city Council could adopt such regulations without any right to object by the conservative federal government. Most important were the

new land tax, the increment-value tax and above all the new housing tax, which was introduced in 1923. According to this innovative taxation scheme a simple worker's apartment was taxed annually at an average of 2,083 % of the pre-war rent, luxury apartments up to 36,64 %. This strong progression distinguished the financing of public housing from all other European countries. Along with other 'luxury taxes', for example on vehicles and in maids, the housing tax equalled about 36 % of all tax revenues or 20 % of the total revenues of the Province of Vienna in 1927. Since the city considered building costs as a lost investment rents were in fact pure maintenance fees: "The rent in the council housing equals about 1/25 of the rent which would be needed to refinance the current building costs and the current bank interest rate (13 %), without accounting for the value of land. " (Robert Danneberg, p.35)

With an average monthly income of 222 shillings the gross rent, without heating, amounted to 7,60 to 9,60 shillings for one of the new apartments in 1925, which is 3,4 to 4,3 % of the income respectively. It covered the use of all communal facilities. Allocation of apartments was organized through a complex score system which took into account social needs – homelessness and health threatening or overcrowded apartments, first of all.

Along with financing, two other preconditions for a social housing programme had to be met: the disposal of available sites by the city and the necessary requirements within the administration itself. For lack of expropriation laws purchasing of sites had to take place on the private market; but the city profited from a severe decrease of land prices as a consequence of the tenants' protection act and of lacking private construction. Thus municipal land property, about 4.690 hectares or 17 % of the whole city surface in 1918, was almost doubled until 1931, when the municipality owned nearly one third of the total area. As unused sites were taxed higher, 2,6 million square metres were purchased in 1923 alone. This allowed an impressive start of the municipal housing programme on 40 sites simultaneously in 1924.

An administrative reform was passed on May 31, 1920, creating fifty-four new municipal departments in seven administrative groups. The administrative group 'Social Policies and Housing' was split in 1927, with an own administrative 'Councillor for Housing and Housing Construction'. Within this administrative group the Office of Urban Construction (*Stadtbauamt*) with its own architecture department with about twenty architects handled the complete implementation of the housing programme. Planning of small projects was carried out by the architecture department itself, which later also took part in competitions. (The

most symbolic building of Red Vienna, Karl-Marx-Hof, was designed by Karl Ehn, an officer at the department of architecture.)

The Office of Urban Construction organised announced also public tenders for construction works and for building material, and organized standardisation and quality control. In fact, the council housing from the 1920s still profit from these high standards.

After 1923 private architects were increasingly commissioned with new housing projects, mostly by direct contracts, partially by competitions. The clear objective of the city was to engage a maximum number of architects, who in practice depended on the state in absence of private construction. About 190 architects were engaged to design 400 buildings until 1934. They were surprisingly independent in the external design of the buildings; new analyses document that there were no design regulations. This explains the architectural variety of the building programme. Apart from the rather ideological discussion about high-rise versus low-rise buildings, which was pragmatically solved in favour of multi-storey housing in reference to the lack of suitable sites within the narrow borders of the Province of Vienna, there was little debate about architecture during the first years. On the other hand, the city provided precise instructions regarding the size of apartments, the amount of infrastructure and the use of standardised building parts.

HOUSING AS PART OF SOCIAL URBAN DEVELOPMENT

The city of Vienna had built some council housing estates shortly after the war, including Metzleinsthaler-Hof by architect Hubert Gessner. However, a comprehensive building programme could be started only with the help of the newly introduced housing tax. On September 21, 1923 the City Council adopted a programme to erect 25,000 apartments from 1924 to 1928. This programme was completed already in 1927. Therefore, the city extended its first programme to 30,000 apartments and decided to construct another 30,000 apartments until 1933. Thus within fourteen years, the city of Vienna completed 61,175 apartments in 348 housing estates, forty-two settlement groups with 5,257 terrace houses and 2,155 commercial premises. One tenth of the inhabitants of Vienna lived in council housing estates in 1934.

The building programme of 1923 provided two types of apartments: The smaller apartment (35 m²) had one room, kitchen, anteroom, and toilet, the larger one (45 m²) additionally comprised of a small bedroom. Since 1925 these basic types were gradually enlarged up to 57 m², also most of the apartments were now equipped with balconies. Following the decision of the City Council in 1923 communal facilities were part of all estates. Meeting

rooms, bath houses, kindergartens, educational workshops, laundries, mother-and-child centres, health centres, special tuberculosis prevention centres, children's' dentist, sports halls, libraries, cooperative shops, etc. were not only a compensation for the small apartments, but actually represent an important step of societal development in housing.

With the first genuine council housing estate house, Metzleinsthaler-Hof built in 1919, a new layout plan was developed; this 'Vienna council housing type' became a standard for all further designs. Contrasting sharply with nineteenth century rental housing staircases now provided access to mostly four apartments per floor; the long corridor of the speculation tenement buildings of the pre-war period was abolished. Green courtyards replaced the former dark backyards, thus diminishing the contrast between the well-lit apartments facing the street and the bad courtyard apartments. Each apartment now had a toilet and water supply facilities, as well as a small anteroom. Typical for council housing was the *Wohnküche*, a living room with kitchenette which allowed heating with coal stove and later gas stove; to reduce the costs no private bathrooms or central heating were built. In some cases also artists' workshops and larger apartments for doctors were included.

Contrary to the buildings of New Frankfurt, which first of all intended to maximize private areas of living, Vienna emphasized the socialisation of housing. Politicians stressed that the 'liberation of housewives' could be promoted through transferring household functions to the communal facilities. (Eve Blau, *The Architecture of Red Vienna*, Cambridge 1998, p. 204). At the same time these communal facilities would demonstrate the superiority of a socialist city – the council housing estates comprising of all those social achievements which represented the difference to the nineteenth century capitalistic city. An improved infrastructure, for example kindergartens, was also to benefit the residents of the surrounding area.

Finally, the *Stadtbauamt* determined the standardised building parts. Doors, windows, door knobs, banisters, fittings, hand-basins, gas stoves, even garden benches were subject to tender and were ordered in a great volume, often for the building programme of a whole year. (Eve Blau, p. 144). This also explains why the housing estates of the 1920s in spite of their architectural variety are easy to recognise, representing implants of a new planning ideology and 'proletarian identity' right in the late nineteenth century urban fabric.

Still, the style of Vienna public housing differs from new building in other European cities, notably in Frankfurt and Berlin. This phenomenon aroused broad interest: In 1926 the German writer Ernst Toller described the Vienna housing projects as 'proletarian forms of culture' in contrast to 'bourgeois' German functionalism; others were less sympathetic: Josef

Frank, although the planner of several housing estates himself, called this form of architecture ironically *Volkswohnungspalast* (people's housing palace) and suggested a new 'proletarian architecture' instead; Adolf Loos and other representatives of a more modern architecture designed functionalist blocks or stepped buildings with large terraces, but were not successful.

Stylistically, most estates are characterized by a certain monumentality, most probably a result of the fact that many of their architects had been students of Otto Wagner, the great turn of the century architect who had built and taught an emphatically metropolitan architecture. Especially the new 'super blocks', complexes with up to 1,400 apartments across several old city blocks neglecting the traditional concept of streets and closed courtyards and intermingling urban structures and functions in a new can be read as a dialectical relationship between past and present and as a new interpretation of the existing urban texture. (Eve Blau, p. 249). Apartments are approached by a step-to-step succession from public via semi-public and private spaces, mostly by entering the staircases from the courtyards. Contrary to private nineteenth century buildings these courtyards are publicly accessible for everybody. In many places they still offer a net of greened safe ways for pedestrians independent of the grid pattern city blocks.

This system of communication areas was first developed by the architect Hubert Gessner who had already designed important buildings for the Social Democratic Party before. Gessner created a symbol of New Vienna, Reumann-Hof, which he originally planned as 'Vienna's first skyscraper' but for cost reasons had to reduce to eight storeys; characterized by an imposing central courtyard this housing estate forms the core of a vast housing area with almost 2,500 apartments along the former Linienwall (the outer defence line). Here, Vienna's second ring road, Gürtel, was to become the 'Ringstraße of the proletariat'. Adjoining council housing estates were designed by the architects Heinrich Schmidt and Hermann Aichinger – who also designed the huge Rabenhof Estate in the third district in 1927, one of the most interesting housing estates in Vienna – by Peter Behrens and by Josef Frank. These neighbouring projects allow an easy comparison of the architectural variety within the council housing programme.

Still, critical remarks continued: on one hand the politically motivated opposition of the conservative Christian Social Party, on the other hand the critics of architects, mostly on the high building density. In fact, with 50 % of the building area covered the density was definitely lower than in the previous period, when it had amounted up to 85 %; nevertheless, the City Council reacted with a further reduction of the density, especially after the

International Urban Planning Conference in 1926. Even such a monumental building like Karl-Marx-Hof, which with its impressive central square, its flag posts and 'city gates', covers only 30 % of the total site. This becomes only evident when entering the huge inner courtyards with their playgrounds and communal facilities. In spite of differing architectural styles, other estates like George Washington-Hof in the tenth district and Sandeleiten in the sixteenth district, with 1,600 apartments the largest housing estates from the 1920s, follow a similar pattern.

Finally, the efforts of the city of Vienna in the field of household furnishing are worth mentioning. Following the general educational efforts of Austro-Marxism, the city tried early to propagate new, functional furniture. Based on an initiative by Margarethe Lihotzky, who had collaborated with Adolf Loos, the *Warentreuhand* company was founded to offer the tenants –in some analogy to the 'bourgeois' *Werkbund* – good, but reasonably priced furniture. Several exhibitions organized by the city of Vienna, as *Vienna and the Viennese* in 1927, were dedicated to the same idea of 'proletarian housing culture'. Finally, the Austrian Association for Housing Reform opened a Centre for the Interior Design and Housing Hygiene (BEST) in the recently completed Karl-Marx-Hof in 1929; this permanent exhibition with model furnishing was open even in the evenings and during weekends. Ernst Lichtblau, a student of Otto Wagner and himself an architect himself of several council housing estates, became its director.

FROM SETTLERS' MOVEMENT TO WERKBUND SETTLEMENT

"We know that a vital aim of a modern civilisation should be to provide everybody with a decent apartment. That is why we want to integrate simplicity and practicality into beauty. We want to contribute to establish through the way of housing a common art of thinking and a common culture from which alone a higher development of mankind will be possible."
(Josef Frank, *Katalog zur Werkbundaustellung*, Vienna 1932)

Although the city, lacking appropriate building sites along public transport lines, was not uncritical towards the settlers' movement, it took up the idea of garden cities again in the second half of the 1920s. Following discussions during the International Urban Development Conference in 1926 about the density of new housing estates some new projects were designed as garden cities in the form of terrace houses or 'colonies of villas'. It also accepted Josef Frank's idea to build a model settlement, based on the German example of a Werkbund exhibition. Josef Frank had personally participated in the Stuttgart Werkbund Exhibition; he was a founding member of CIAM and, like Josef Hoffmann, a Vice President

of the Austrian Werkbund, which had been established in 1913. Unfortunately, the Vienna Werkbundsiedlung did not have a successful start; it had to be deferred from 1930 to 1932 due to organizational and financial reasons; the architects who had worked on the Stuttgart Weissenhof Exhibition in 1927 were not invited, thus excluding the majority of the international avant-garde; and the opening of the exhibition coincided with the world economic crisis and with the foreseeable end of democracy in Austria, and subsequently the end of Red Vienna. The seventy houses were also too expensive and could only partially be sold, the remaining units managed by the city of Vienna until today.

Nevertheless, the housing itself is impressive and under better economic and political conditions would have provided an impulse for the further development of social housing. Adolf Loos, who in spite of his critical view of the Austrian Werkbund (“the superfluous”) designed two semi-attached houses, impressed by transferring his *Raumplan* (a methodology of three-dimensional planning) to the smallest floor plans; other interesting contributions include Gerrit Rietveld’s terraced buildings, Anton Brenner’s prototype of a high-density low-rise development and Hugo Häring’s ‘sleeper’ floor-plan. Other architects – among them Josef Hoffmann, Clemens Holzmeister, Anton Plischke and Margarethe Lihotzky – developed prototypes of terrace houses similar to the old Vienna workers’ settlements, while Josef Frank and Richard Neutra designed villas which contrasted sharply with the intention to promote affordable mass housing.

FASCISM AND WORLD WAR TWO

After closing of the Parliament and prohibition of all parties, with the exception of the Christian-Social Vaterländische Front (the conservative party), a civil war between the Social Democratic *Schutzbund* and the Christian Social Heimwehr followed in February 1934. Not merely symbolically this led to severe damages in council housing estates by the *Bundesheer*, the Austrian army. Today a memorial tablet on Karl-Marx-Hof, which was also badly damaged, reminds of the fight of the Austrian workers against fascism. The fascist *Ständestaat* took Mussolini’s Italy as a model. The Vienna City Council was dissolved, and Vienna lost its status as a Province and became a city directly governed by the state in May 1934. Free elections did not take place until 1945.

The defeat of Red Vienna also meant an end for its social housing policies – although the economic situation had already influenced negatively the housing development since 1929. If 29,1 % of total municipal expenditure were still flowing into housing during 1925–1929, it was

only 18,1 % during 1930–1934. (Günther Chaloupek/Peter Eigner/Michael Wagner, *Wien-Wirtschaftsgeschichte 1740–1938*, Vienna 1991, p. 844) In addition, the state had drastically reduced the tax payments to the city of Vienna due to political reasons. After 1934 only some little housing was built, including some agricultural settlements for the unemployed and ‘family asylums’ for the growing number of homeless, later followed by a few NS-regime housing estates. World War II ended with the demolition of 87,000 apartments, about 20 % of the stock – more than Red Vienna had built before.

PUBLIC HOUSING AFTER 1945

In 1945 the city, heavily hit by war destruction and by famine and separated into four sectors, organized a conference on the reconstruction of the city to define the general political objectives. These included the reduction of density in inner city areas while increasing the density of suburban areas by garden cities, and the setting up of architecture competitions. The “human being (should) in future stand in the centre of all considerations and plans (...) and not the income or profit of the individual“ (Magistrat der Stadt Wien, *14 Punkte für den Wiederaufbau*, 1945). The housing shortage amounted to some 117,000 units.

Already in 1947 the foundation stone was laid for a large council housing estate at the southern periphery. It was named after the Swedish Prime Minister Per Albin Hansson who made it possible by a Swedish help programme. The architects under the direction of Franz Schusters planned 1,000 clearly structured terrace houses and apartments, and a kindergarten, a school, and a multipurpose communal building. Other large housing estates, such as Siemensstrasse and Hugo-Breitner-Hof, followed, the average annual building capacity in social housing increasing to nearly 5,000. In addition, in 1950 a special building programme was introduced offering so-called duplex apartments – small sized dwellings, which were meant for a subsequent merging. In spite of this obviously cheap housing programme, all new estates were equipped with generous communal facilities – schools, kindergartens, health and leisure facilities, and shops. Communal baths were not built anymore as all new apartments were equipped with their own bathrooms, gradually also with central heating. In 1954 the corner stone for the 100,000th council flat was laid. Until 1958 the reconstruction of Vienna was essentially completed and the most urgent housing shortage was eliminated, while the number of inhabitants continued to decrease due to the geopolitical situation of Vienna next to the iron curtain. Not surprisingly, the economic dynamics of the city were also slow.

The architectural quality of most post-war estates could hardly equal that of the 1920s. This cannot be explained by financial problems alone, as 'Red Vienna' had not been wealthy as well (although due to radical tax legislation it disposed of more direct revenues for housing). Rather the international isolation of the city, its exclusion from uniting Western Europe during the Cold War and, first of all, the loss of most of its intellectual elite during Austro-Fascism and National-Socialism were responsible for it. A substantial part of the innovative architects had left (or was forced to leave) Austria in 1934 and in 1938. Josef Frank, for example, became a pioneer of new Swedish furniture design, while Margarethe Lihotzky – after working in Mexico and Turkey and imprisonment by the Nazi regime – was engaged in the planning of new cities in the East of the Soviet Union.

The main objective of the city of Vienna was to improve the quality of housing stock by intensive new construction. Although the announced demolition of vast densely built-up areas with low housing quality did not take place construction of large new housing areas at the northern and southern peripheries started with the opening of the first prefabrication plant in 1961. Mainly the Grossfeldsiedlung with about 5,300 apartments became a synonym of panel housing construction based on the French Camus system. In spite of vast green areas and a generous infrastructure these estates became an object of various critics, mostly concentrating on the monotony of the architecture. During the first phase of prefabrication the use of cranes allowed only uniform parallel blocks. Another problem was an inadequate public transport; the construction of an extended underground line to Grossfeldsiedlung is only taking place now.

Apartments, on the other hand, were large and well equipped, which explains their acceptance by the residents. In fact, the mobility rate in these estates has not been higher than the Vienna average – and that means very low! Panel housing estates never became slums or ghettos, as often had been predicted. Later attempts to increase their density were opposed by the residents. The panel housing estates of the second phase tried to take up pre-war architecture with interior courtyards. All apartments were now connected to the district heating system, had balconies or terraces and partially also flexible floor plans. Some of the most remarkable prefabricated housing estates were designed by Harry Glück. His Alt Erlaa housing area, built and managed by the city-owned GESIBA, comprises of more than 3,000 apartments, a school, a kindergarten, a medical centre, sports and leisure facilities (including sauna and rooftop swimming pools), a shopping centre and its own underground station. It represents an urban landmark and today is part of the urban development axis in the south of Vienna.

But first of all, rents were still very low. The input of the industrialized housing production in the 1960s and the 1970s for an improvement of the quality of apartments in Vienna in general is undisputed. The enormous volume of construction of more than 10,000 public apartments per year relieved the housing situation in the densely populated inner city and created the pre-conditions for the vast urban renewal programme of the next decades.

THE 'SOFT' URBAN RENEWAL

The heritage of Vienna's late nineteenth century period is unique; the city planning of the Ringstrasse period and the artistic revolution of the Secession have shaped Vienna, and are now its assets in city tourism. But for the urban fabric those densely built-up districts on both sides of Gürtel, Vienna's second ring road with roughly one million inhabitants are equally important. With regard to nearly 30 % of all apartments built before World War I, Vienna may be called Europe's oldest capital city. The importance of these inner city districts lies in their urban variety, their (still) existing mixture of functions, and their flexibility, as well as their capacity to absorb new functions, new lifestyles and immigrants. At the same time these areas have to be improved – first of all, the quality of the apartments and of open spaces.

Since 1974 *Gebietsbetreuungen* (area renewal offices) run by architects or housing developers commissioned by the city have been installed to coordinate and to promote rehabilitation programmes, predominantly in the private housing stock. Working along the principles of 'soft', i.e. social- and resident-oriented urban renewal strategy, fourteen area renewal offices are currently active in districts in need of renewal. These offices have a neutral position between all actors involved, and they are not allowed to carry out their own private planning business in that area – a significant difference to rehabilitation commissioners in many other European cities.

Ten years later Vienna started what has probably become the world's largest housing rehabilitation programme with up to now more than 170,000 refurbished apartments, an average of 10,000 per year. In accordance with the tenants, the quality of apartments is improved – installation of WC's and bathrooms, connection to central heating or district heating system, improvement of thermal insulation, installation of lifts, etc.– without displacing the mostly low-income sitting tenants. Urban renewal is based on an extraordinary subsidy system with an annual budget of about 218 million Euro deriving from national tax revenues. Most of these are dedicated to the renewal of old private rental buildings, but within this programme housing estates from the 1920s – and increasingly from the 1950s to 1970s – are completely rehabilitated and modernised. The conversion of attics and merging

of offers larger housing for young families. The overall rehabilitation and modernisation of Red Vienna housing estates, including such significant buildings as Karl-Marx-Hof, Rabenhof, George-Washington-Hof or Sandeleiten, have helped to preserve their extraordinary architecture for the future.

SOCIAL HOUSING IN THE 1970s AND THE 1980s

During the 1970s and the 1980s some remarkable estates were built in Vienna within the framework of social housing. Two of them are situated next to each other at Tamariskengasse. Viktor Hufnagl – who had already built a subsidized housing estate in Gerasdorferstrasse – connected two low blocks of apartments by a covered inner street thereby creating a semi-public space to be used the whole year. Vienna's former City Planner Roland Rainer planned a dense council housing estate with small private gardens. Another housing area in the south of Vienna, designed by Raimund Abraham, Carl Pruscha and others, appears somewhat radical, but the introverted and externally even repelling design of the Traviata Estate hides refined apartments with intimate open spaces.

Wienerberg with nearly 2,500 apartments is one of the most successful urban expansion areas. The two-stage planning process was innovative itself; on the basis of the master plan which resulted from the first stage of the competition, a second competition was announced for smaller building lots, which were then sold to various housing developers and architects. In addition, council housing and non-profit apartments housing including condominiums were offered side by side to achieve a better social mix and urban variety – meanwhile a standard procedure for the planning of larger residential areas. Architecturally, the low-rise blocks by Gustav Peichl attract attention.

Various projects focussing on participatory planning in social housing are characteristic for Austria's political awakening in the 1970s and the 1980s. There is an impressive variety of residents' participation in planning of subsidized housing – from 'Living with children' by Ottokar Uhl, who also realised other participation projects, the 'Wohnhof Ottakring' rehabilitation project to socially orientated group projects like 'BROT'. Of course, such projects also exist elsewhere, but in Vienna they find their place within the framework of social housing.

INNOVATIVE ARCHITECTURE TODAY

The fall of the Iron Curtain, only sixty km from Vienna, led to the immigration of more than 100,000 people and set up new challenges for the city, including the suddenly increased demand for housing. The city doubled its new housing construction to 10,000 units per year in the middle of the 1990s. A key role was given to the Vienna Land Procurement and Urban Renewal Fund (WBSF), which was established to purchase the needed land. Today the market has reached an equilibrium, which allows to pay more attention to quality criteria. Also, today at least half of the subsidized apartments, still 6,000 to 7,000 units per year, are to be built in inner city areas. There, land costs are higher there but the infrastructure already exists, and a better demographic and social mixture can be achieved in the late nineteenth century housing areas.

Larger new housing projects are normally carried out in the form of *Bauträgerwettbewerbe* (housing developers' competitions). These are based on free competition of developers for social housing subsidies. The procedure differs from architecture competitions, as the project applicants are the housing developers themselves and, in addition to the architectural quality, economic and ecological qualities of the projects are judged equally within a complex score system. Competitions aim at the reduction of construction costs in multi-storey housing as well as a simultaneous improvement of planning and environmental and technical qualities. The jury consists of architects, representatives of the construction sector and of the city of Vienna, and of specialists in the fields of ecology, economy and housing law. A significant increase in quality could be achieved in recent years leading to innovative designs of apartments and of communal facilities, better planned open spaces and communication areas, and to ecological innovations. For example, all subsidized new housing projects have achieved a low energy consumption level since 1996 (max. 50 kWh/m²/year). At the same time construction costs could be reduced by an average of 20 % – now 1,100 euro / m² (1,000 US dollars) – through intensified competition.

Experimental building, often in form of 'theme-oriented' estates with topics pre-determined by the city, has a major share in the qualitative development of Vienna public housing. For example, nearly 750 apartments in the Thermensiedlung Oberlaa are heated with waste water from the neighbouring hot springs, at the same time a grey water system and rain-water collectors to water the lawns were installed. The Autofreie Mustersiedlung (car-free model estate) by architects Schindler, Szedenik, Lautner and Scheifinger, the largest of its kind in Europe, transferred the means needed normally for the construction of carparks into an impressive infrastructure: greened roof-gardens, parking lots for bicycles, internet-cafe, meeting rooms, etc. A comprehensive ecological concept was realized: low energy

consumption level, use of solar energy, a loading station for electric cars, heat recovery from waste water, a grey water system, hot and cold water metres with electronic measuring in every apartment, green areas with humid biotopes and intensive planting, use of recycled materials for the design of open areas. Also there are special forms of housing (children's day-care centre, apartments for senior residents), the offer of differently equipped apartments, participation of residents in day-to-day management, and car-sharing.

In the *Frauen-Werk-Stadt* a whole housing area including infrastructure was planned exclusively by women architects, aiming at family-friendly layouts, a direct view from the kitchens to the playground, etc. Especially noteworthy is the kindergarten designed by Elsa Prochatzka.

So far the most radical experiment within the framework of subsidized housing is the so-called *Sargfabrik* (coffin factory, architecture by Baukünstlerkollektiv 2, 1992 to 1994) in the densely built-up fourteenth district. This project was planned by a residents' group; it organizes living by providing strongly variable 'housing boxes', and offers a wide choice of communal leisure facilities, including a restaurant, a sauna, meeting rooms, and a kindergarten, all of which can also be used by neighbourhood residents. Following this housing estate which won the Adolf-Loos-Award, a second *Sargfabrik* in the adjoining city block offers unusual architecture as well. Based on the enormous public interest the non-profit association is now planning a third housing estate.

Other remarkable interventions in the grid-pattern nineteenth century urban fabric include a housing estate by architects Dieter Henke and Marta Schreieck in Frauenfelderstraße in the seventeenth district. Sliding windows and elements with venetian blinds in front of the very diverse apartments change the appearance of the building during the day.

Several new projects aim at the integration of immigrants into the Austrian society, among them *Interkulturelles Wohnen* (architects Kurt Heidecker and Herbert Neuhauser) with its communal facilities, which became a model for similar estates. Last not least the topic of 'living and working under one roof' takes an important role in discussions about future urban development. 'Compact-City' (architecture: BUS/Spinadel/Blazica/Lalics), to be completed soon with fifty-nine apartments from thirty-six to 105 m², twenty-two offices, twenty workshops, studios, office premises, and storage rooms, will offer a mixture of functions at the fringes of the city.

These projects are to be understood as experiments, which can help to introduce new contents and standards into social housing over a longer period. The city also carries out a

continuous research and evaluation programme. Spreading the gained knowledge among national and international experts should also help to promote Vienna as a centre for new urban technologies.

NEW HOUSING AT THE DANUBE

As a consequence of the nineteenth century regulation of the Danube Vienna actually was not situated at the Danube any more but at Donaukanal, a smaller branch of the river. The large districts of Floridsdorf and Donaustadt were separated from the inner city. The project of a joint World Exhibition together with the city of Budapest – planned before the fall of the Iron Curtain! – provided a realistic chance to overcome this separation. Although the EXPO had to be cancelled after a negative referendum in Vienna the city had already started with works at the left embankments of the Danube next to the existing UN-offices. A waste deposit had been removed, and the decision had been taken to bridge the expressway along the Danube at a length of one km to create new building sites connected to the embankments. With the completion of the U1 underground line, reducing the travelling time to the city centre to seven minutes, the *Platte* (covering) above the expressway had become one of Vienna's most attractive building plots.

The masterplan developed for his area by Adolf Krischanitz and Heinz Neumann is characterized by a complex multi-level system of communication, and by strict grid-pattern blocks; but large areas are preserved as open greened spaces. The new 'Donau-City' was to relief the old city, offering additional office space, as in the elliptical tower by Wilhelm Holzbauer and the planned twin-towers by Peichl/Isozaki. The area also includes research institutes, a school designed by Hans Hollein, a church by Heinz Tesar, kindergartens, shops, and 2,000 apartments. These are integrated into the grid-pattern scheme, which unfortunately deprives many apartments of a direct view to the river. It seems, that at the crossroads of Vienna's most significant urban axis and the Danube a self-confident urban gesture was given an absolute priority.

There are some remarkable buildings by Elke Meissl/ Roman Delugan: the tower facing Donaupark with partly subsidized, partly privately financed owner-occupied apartments; and the 'beam', a long block parallel to the river with all apartments oriented towards the embankments and the city, the glazed corridors being situated at the back. The transparent building, seemingly floating on its pillars, forms a stunning landmark of the new river front, especially in the evenings.

Next to Donau-City there are two other social housing projects: Wohnpark Alte Donau with, among others, a tower by Coop Himmelb(l)au, and Wohnpark Neue Donau by Harry Seidler.

SOCIAL HOUSING IN TOWER BLOCKS?

Until the end of the 1980s only few towers had been built in Vienna for housing purposes; and most of them were high-rise buildings in terms of the Vienna Building Order, i.e. any structure higher than twenty-six metres, rather than 'real' skyscrapers. A breakthrough was achieved with Donau-City and Alte Donau housing estates. Living in a high-rise building suddenly became popular. The city adopted its own 'tower concept' in 1994, describing the conditions concerning infrastructure, accessibility by public transport, and compatibility with the character of the city. Thus social rental housing and subsidized condominiums in tower blocks became a reality. Within a short period plans for high-rise housing projects at several significant points were developed. This includes the towers next to the Danube, and Wienerberg at the southern entrance to Vienna with the dominating Twin-Towers by Emiliano Fuksas (Vienna's second highest office building after Gustav Peichl's Millennium Tower), high-rise housing by Coop Himmelb(l)au by Elke Meissl/Roman Delugan and others being under construction.

Two tower housing estates mark both ends of the new U3 underground line: at its western terminus (Ottakring) a nurses' home by Manfred Nehrer and Reinhard Medek with Harry Seidler as design consultant; at its eastern terminus (Simmering) a tower block by Dieter Blaich/Kaj Delugan, an elegant structure containing 120 social rental apartments. Its projecting facades aim at redefining the urban space at this heterogeneous multi-functional traffic junction; at the same time the modest scale of the adjoining older public housing estates is respected. Communal facilities include a children's playroom on the fifth floor.

HOUSING IN FORMER INDUSTRIAL BUILDINGS

Brownfield development has been playing an important role in recent years due to limited land resources and to the high costs for infrastructure in peripheral areas. Also, a new use for protected industrial monuments from the nineteenth century has to be found. Vienna may well present one of the world's most spectacular conversion projects at 'Gasometre-City', opened in 2001.

Four huge gas tanks, erected in 1899 as part of continental Europe's biggest gasworks, had been unused since 1986 when the gas supply was changed to natural gas. After several

feasibility studies the city decided to convert the powerful buildings, enormous brick constructions which had hidden the iron gas containers, into a multifunctional district. Line 3 underground connecting Gasometre-City to the city centre within a few minutes the new complex should also form the nucleus for a complete redevelopment of the former industrial area.

The general design intends to preserve the *genius loci* of this industrial monument, which meant not to fill the interior space but rather to implant new transparent volumes and to bring in natural light. This led to a fragile new structure contrasting sharply with the imposing historical brick walls. Jean Nouvel, one of the architects, used a heavy concrete base to carry the upper storey steel construction. Three developers, two of them non-profit associations, and four architects were commissioned by the city after a competition. The buildings include 602 apartments with 71,400 m² of useable floorspace, most of them subsidized within the social housing programme, and additionally 250 units in a students' hostel. Further 47,100 m² serve for commercial purposes: a shopping mall with seventy shops, offices, and the Provincial Archives with a study room. The underground carpark offers parking for 811 vehicles, 1,200 more can park on special parking decks. The 'city' also includes one of Vienna's largest event halls with up to 4,000 seats, and a kindergarten. A bridge connects the mall to a cinema centre by architect Rüdiger Lainer. Housing in all towers starts twenty-five metres above the street level.

Tower A was designed by Jean Nouvel. Eighteen tower-like structures with fourteen floors each encircle the interior space, separated by air slots providing direct lighting from all sides and outside views from all apartments. Coop Himmelb(l)au at Tower B implanted a closed circular volume with an interior courtyard, but added an eighteen-storey block. This 'rucksack' has become a significant sign of the whole development as it is the only outside part contrasting with the existing architecture. The event hall is situated under the mall, its constructional parts completely separated from the rest of the building to avoid noise problems; the floors above the mall contain the students' studios. Tower C by Manfred Wehdorn has a similar structure with a greened courtyard above the mall, whereas Wilhelm Holzbauer in Tower D designed a central building with three starlike wings, thus creating three smaller courtyards which open towards the outer walls of the protected monument.

Despite some initial scepticism the project proved a great success. Within a short time all apartments and business premises were sold or let, at prices comparable to other subsidized housing projects. But Gasometre-City also proved that social housing does not necessarily conflict with ambitious planning by international 'star' architects. If Jean Nouvel and Coop

Himmelb(l)au were engaged in the Gasometre project, and architects like Herzog & de Meuron, Boris Podrecca, Gustav Peichl, or Otto Steidle in other completed Vienna housing estates it is new projects by Zaha Hadid (a proposal to bridge the old arches of a former railway line) or Norman Foster (masterplan for the multi-purpose Euro Gate project with several thousand apartments) that are being developed just now.

Resumé

Decentralized Housing Policies

Within the federal constitution of Austria the nine *Bundesländer* (Provinces) enjoy a certain freedom in formulating their housing policies. Vienna, which is also a province, differs considerably from the rest of the country being Austria's only metropolitan area. This is due to its historic and political development described in the first chapters of this book. In 1988, most of the respective legal instruments were completely decentralized to the Bundesländer, leaving only a few regulations at national level – most importantly, the Tenancy Act, the Home Ownership Act, and the Non-Profit Housing Act.

Secure Financing

The financing of social housing, both in the rental sector and in the subsidized owner-occupied and single-family housing sector, is based on a fixed, earmarked part of the income tax, the corporate tax, and the housing contributions, the latter of which is paid directly by all employed persons. These national tax revenues are distributed to the nine provinces according to a complex financial agreement, Vienna receiving approximately 450 million euro (414 million US dollars) each year, which is earmarked for housing purposes. Despite several cuts in recent years this way of financing still provides a secure base for the planning of social housing programmes on a large scale, which would not be possible under strictly market-oriented housing policies. The city itself, however, had to contribute further means from its own budgets in recent years due to an increased housing demand. Although this subsidization of housing from earmarked tax-income is to some extent dependent on the overall economic development, subsidies such as these directly influence the production of new housing – contrary to tax-deduction models used in many countries that primarily benefit better-off households.

Non-profit Housing

As Austria's biggest landlord, the city of Vienna owns about 220,000 rental apartments. Still, in recent years, the major part of new social housing has been carried out by non-profit housing associations under varying legal conditions. These associations are subject to the national Non-Profit Housing Act and to a second control by their own corporation and by the respective provincial government. At present, about 200 non-profit housing associations are active in Austria, managing some 650,000 apartments and building another 15,000 each year. In Vienna, they own and manage about 136,000 apartments, in addition to the city's own 220,000, and even the major part of the owner-occupied apartments has been built within the subsidized housing programme. These owner-occupied apartments are therefore also subject to certain limitations concerning the income per household and the later sale of the apartments. Non-profit housing associations enjoy tax-reliefs and have to re-invest profits back into housing. Rents are strictly regulated, the cost-rent covering financing, the running costs and the 10 % value-added tax (consumer tax). The maximum monthly net-rent for a subsidized apartment in Vienna is currently 3,54 euro / m² (3,26 US dollars), or 5–6 euro / m² (4,60 to 5,52 US dollars) in total. Low-income households are entitled to individual subsidies ensuring that they do not lose their apartments in case of a sudden illness or unemployment.

To reduce financing costs most developers ask a down-payment, which in rental housing may not exceed 12,5 % of the total construction costs, as well as a share in land costs. These contributions by the tenants are refunded with interest when the tenants move out. Low-income households are entitled to low-interest public loans or even to apartments without a down-payment. All subsidized apartments are subject to certain income-limits at the time of completion, high-income households are mostly excluded from such housing, for example. On the other hand, a later increase of income does not lead to a loss of the apartment.

Direct and Individual Subsidies

The federal constitution allows Vienna to set its own criteria for housing subsidies more or less autonomously; object-subsidies are given to the developers in order for them to reduce the financing costs and rents. Typically, the amount of non-repayable subsidies is around 30% of the total construction costs. Meanwhile – with regard to EU regulations – such grants have been replaced by public 1 % interest loans of up to 35 years, at a volume of 508–580 euro / m² (467–534 US dollars) of useable floor space. Contrary to individual grants these subsidies give politicians the possibility to directly influence housing production. Still, the percentage of subsidies to the tenants is increasing, low-income households now even have a legal right to receive such *Wohnbeihilfe*.

Reducing Construction Costs

All subsidized housing projects are subject to public tender, with the best offer (not necessarily the cheapest) to be commissioned. Presently, total construction costs, including those for planning, amount to 1,000 to 1,200 euro / m² (1,012 to 1,104 US dollars) of useable floor space, plus a maximum of 218 / m² (200 US dollars) for the respective share in land costs. Higher land prices are usually not accepted for social housing purposes. The city of Vienna profits from its strong influence on the land market due to the high percentage – approximately 90 % – of social housing within the total housing production, and due to the *Widmung* (dedication) of large areas exclusively for housing purposes. Housing developers' competitions, organized for all larger projects, also help to reduce construction costs. Developers have to offer a complete product, consisting of the planning, of ecological measure, and of exact economic calculations, and are judged by an interdisciplinary jury along a complex score system. Developers have to give a price guarantee, otherwise they risk losing the subsidies!

Ecology

As a result of several experimental buildings, low-energy consumption (max. 50 kWh/ m² / year of total consumption) has now become the rule in new housing. This is also seen as one of Vienna's contributions to fulfil the requirements of the Kyoto Treaty, which was also signed by Austria. Other ecological measures include individual water metering, the use of rainwater and 'grey' water, passive and active solar energy use, etc.

New housing estates are required to connect to the city-owned district heating system; as far as technically feasible, this is also the case with all subsidized renewal projects. Currently, some 212,000 apartments – about 25 % of all housing in Vienna – as well as a large number of offices and business premises are connected to this heating system. It comprises of 900 kilometres of pipes. Each apartment metered individually. The initial temperature lies between 95 and 150 Celsius depending on the outside temperature. About 25 % of the necessary energy is provided by waste incineration, the rest comes from linkages to several power stations and a large refinery. Only at peak times, close to 4,5 % of the annual consumption has to be produced in five gas or oil power stations. Thus 64,6 % of all primary energy can be saved, equalling a reduction of CO₂ output of one million tons. The present capacity of the district heating company is extended continuously.

Tenants' Security

Despite much controversy, the 1917 Tenancy Act, which regulates the maximum amount of rent that may be asked for an apartment according to location, legal status, and construction period, has remained a national law until the present day. Only in very few, exactly defined cases, rents can be increased. Limited rental contracts have been allowed for some years. Most Vienna households nevertheless dispose of indefinite rental contracts, which can even be passed on to children occupying the same flat. In social housing only indefinite contracts are permitted, and tenants enjoy a broad participation in the day-to-day management of the building. But also in privately-owned rental buildings, tenants are guaranteed important rights; they may, for example, carry out improvements against the owner's decision (but not the other way round!). Disagreements between landlords and tenants can be decided by a city-run arbitration office without any extra costs. Decisions of this department are legally binding and can be passed on to the courts. This unusually high security for tenants may explain why about 80 % of all Vienna residents live in rental apartments.

Balanced Neighbourhoods

In order to prevent the emergence of social ghettos, new housing areas usually comprise of apartments of different costs and of various legal statuses: rental and owner-occupied apartments with higher or lower subsidisation, as well as privately financed condominiums, the latter being without any income limits. As a result, large new housing estates have a rather good social mixture.

Social City Planning

In Vienna housing is understood as a part of social-oriented city planning. The city has installed an infrastructure commission to define in detail the conditions for subsidized housing projects. Thus, new housing projects form a part of an existing area and help to overcome infrastructure deficiencies, such as in schools, health institutions, etc. Public means of transport are equally important.

The general rules are put down in the City Development Plan and are being revised and adopted by the City Council roughly every ten years. It defines the general aims and the development trends, including among others, the housing or business areas, axes of urban development along public transport lines, green areas, etc. Other plans, notably the Land Use Plan, are based on this general conception.

The Land Use Plan is subject to broad public participation by residents, district councils, etc., and is also adopted by the City Council. It includes the exact Widmung of each single plot in Vienna. These plans are worked out by the respective City Planning Departments (MA 21A,

B or C) and by the politicians (councillors) bearing the responsibility for urban planning and housing.

Social Architecture

The general policy of Vienna, i.e. not to leave urban development and housing completely up to the free market, is complemented by the housing subsidies and by the regulations of the Building Order, a Vienna provincial act. In its first part this law rules issues of city planning, like the interdisciplinary Advisory Board for Urban Planning and Urban Development, and the contents of the Land Use Plan. These plans have to describe in detail its exact use for each plot of land, the height and form of the buildings (free-standing, attached, etc.), the maximum density, the number of green areas, underground building parts, etc. They are legally binding for everyone after adoption by the City Council.

Other chapters of the Building Order law stipulate the technical requirements, such as health protection and handicapped accessibility, as well as the architectural design. Without impeding modern architecture even in so-called protection-zones, any disturbance of the overall urban landscape should be prevented. The city has an own architectural department (MA 19) to provide advice and to offer assistance in deciding about new buildings, reconstructions, or the design of open areas. The department has also collected data about culturally valuable buildings, which can be accessed via the World Wide Web.

Information and Public Discourse

A further development of social housing concerns urban planning, architecture, ecology, and last but not least, social policy. This needs a continual broad discussion by the general public and among experts, as well as continuous information availability. This includes special housing research programmes and the distribution of their results by publications, presentations, and the regular publishing of housing issues in the media. Of course the clients of social housing, potential house-hunters for example, have to be informed comprehensively and un-bureaucratically. At the city-owned company Wohnservice Wien, all information about planned and completed subsidized housing projects can be obtained at its centrally-located centre or via its web page. But this is only the beginning. The city is now implementing its e-government strategy, which in the near future will enable residents to carry out all necessary steps from their homes, from the first overview of new housing, to the reservation of a particular apartment.

Vienna social housing thus represents a manifold system, which for decades has continuously developed and adapted to meet new challenges. In spite of its complexity,

however, its primary aim should be kept in mind: to offer comfortable contemporary housing in an attractive urban environment to all residents at affordable prices.