

November 2018

REPORT

In search of affordable housing

A European challenge

Marie Baléo

Table of Contents

4	Stockholm
16	London
34	Paris
46	Berlin
60	Warsaw
68	Munich
78	Bordeaux
86	Project timeline
87	Acknowledgements
88	End notes
95	Credits

Introduction

For the last few decades, we have been experiencing globalisation, the polarising effects of which can now be seen: the polarisation of jobs – those created today are often either highly qualified or on the contrary relatively basic and poorly paid – and also income, skills and territories. **This polarisation creates divides between people and highlights inequalities. It contributes to the gradual atrophy of the middle class and also affects housing.** In several European countries, there is a **striking contrast between deserted municipalities and town centres with an abundance of vacant (and affordable) housing and expanding major cities, dense and attractive, in which housing is becoming each day less accessible to low- and medium-income households.** The once achievable dream of becoming a homeowner in a city is now slipping away from the middle classes, as land and construction prices continue to rise.

Ten years ago, the financial crisis revealed **the key importance of housing in households' financial security, a consequence of the property purchase incentive policies of the 1970s** which, in the United States as in Europe, detracted housing from its original function as a shelter to make it the primary means of building household wealth. It is specifically because housing is the key element in many households' financial strategy that the middle classes are now anxious when facing the prospect of being downgraded on account of globalisation. **Yet while it is a key concern for city-dwellers, housing is the main urban resilience challenge for cities,** affecting the ability of individuals, communities and urban systems to survive, adapt

and grow in spite of this situation of chronic strain. **The vitality and economic functioning of our cities are not solely dependent on the presence of innovative ecosystems, promising economic sectors and top-ranking universities: they also depend on low- and medium-income households.**

With the production of housing in European cities is hindered by **physical, topographical, regulatory and political restrictions,** and with affordable housing becoming so scarce that low- and even medium-income households are at risk of no longer being able to live in cities, the dynamism of entire urban economies is now at stake. **And with good reason, as a city will not remain very attractive for long if it cannot provide housing... One example is the city of Stockholm, where the job market is suffering from saturation and disproportionate prices in the residential stock.** Across the Atlantic, the same crisis has been ongoing for a long time in Silicon Valley, where an increasing number of employees are forced to sleep in their cars, and in New York City, which has transformed from a city into a luxury object where many households cannot even afford to rent a studio apartment.

For major cities, refusing to act to curb the soaring property prices and letting low- and medium-income households move further away from their centres, resulting in increasingly long and expensive commutes, is not an advisable or sustainable solution. Cities thus need to understand the causes of the current shortage, be they the consequence of their attractiveness and economic dynamism, or the

repercussions of their specific political, economic, or historical characteristics... **This is the purpose of this report, which aims to provide cities with an analysis of the difficulties currently facing major European cities in resolving the housing crisis.** This is a genuine societal issue, as European cities' responses to the housing issue will also clarify the way in which we wish to shape our societies in the decades to come.

This report, written in the wake of interviews conducted with around thirty experts in seven European cities (Paris, Bordeaux, London, Stockholm, Berlin, Munich, and Warsaw), highlights the need for public authorities to step up their involvement in the housing sector. It is on the scale of major cities, which have a magnifying effect on globalisation in which inequality, spatial fractures and social and economic segmentations are on the rise, that this intervention must be rolled out, because the housing crisis is not and never was a national crisis. The observed territorial ultra-polarisation of housing and spatial mismatch between supply and demand must now incite cities to revise their approach. **The difficulties facing the major cities studied in this report illustrate the shortcomings related to inaction. The solutions that they are currently striving to implement also indicate that there is still hope and that the urban crisis of our century must above all be resolved through political willpower.**

Stockholm

A universalist vision of housing
tested by shortages



“I believe that if we fail to meet housing demands, we run the risk of a revolt”. This is how Ann-Margarethe Livh, former Vice-Mayor of Stockholm responsible for housing, describes the current situation in the Swedish capital, whose housing shortage is now threatening its economic attractiveness.

The shortage affecting Stockholm is a result of the crisis which is affecting Swedish housing as a whole. The public housing system, the aim of which can be summed up by the maxim “dwellings for all”, now seems unable to meet its primary goal. At issue here is the fact that no housing has been built for almost two decades, that demographic growth was boosted by the arrival of asylum-seekers and refugees starting in 2015, and that a significant part of the municipal housing stock was sold to its occupants, resulting in the attrition of said stock. Stockholm must now redevelop this stock if it is to retain its resilience.

1965-1974: one million apartments to provide “dwellings for all”

Having experienced a period of robust economic growth coupled with rapid urbanisation in the years following World War II, Sweden suffered from an acute and widespread shortage of housing beginning in the 1960s. As housing became a key priority for the Social Democratic Party in power², **the Swedish State approved the Million Programme in 1965, an ambitious initiative to build one million apartments** (100,000 per year over ten years), in a country which had a population of eight million at the time. To roll out this policy, the state was able to rely on “generous 100% loan programs and interest subsidies/interest guarantees”³. Although the Million Programme was designed as a

housing initiative aimed at the middle classes, it quickly became clear that its dense and standardised housing blocks were struggling to attract their target occupants who were not convinced by their architectural characteristics and uniformity (in 1968, the Swedish Home Office expressed the view that “*the projects shall have a high degree of uniformity. A strict limit of variants shall be maintained with regard to measurements of building components, stairways, floorplans and configuration in general*”⁴). **In the early 1970s, as 500,000 of the planned housing units had been built and the country’s economy entered a period of economic slowdown, the Swedish housing stock became surplus** and some of the Programme’s housing units remained vacant for a long time⁵, particularly in the capital: “*In Stockholm, production of the Million Programme units continued well into the 1970s until all planned units were completed, even though the population of Stockholm was to decline from 787,182 in 1965 to a modern low of 647,115 in 1981*”⁶. **The Million Programme housing units then began to concentrate underprivileged populations, often of immigrant backgrounds:** they currently account for 85-90% of inhabitants in the districts targeted by the Million Programme⁷. In the following decade, the Programme was called into question. It was believed to have caused spatial segregation and that its housing had failed to offer inhabitants a suitable connection to the social infrastructure they required.

Stockholm - key figures

Population: 897,700 inhabitants

Percentage of single-person households: 44%

Percentage of inhabitants of foreign background: 31%

Average yearly income: €35,585

Unemployment rate: 8%¹



Fig. 1:
Public housing block built as part of
the Million Programme, Gröndal.

1990-2010: a housing surplus, economic stagnation, and a stop to construction

From the 1970s to the 1990s, **Sweden, which was still resting on the achievements of the Million Programme, continued to have a housing surplus** (*"in 1995, more than 80% of the municipalities reported an excess supply of housing"*⁸), together with significant vacancies in suburban housing stock. **In the 1990s, however, there was a pronounced contraction in housing construction** due to the drying up of previously significant building subsidies, at a time when Sweden was hit by a credit crunch which forced the Swedish government to spend 4% of its GDP to rescue banks facing bankruptcy⁹.

No housing was built for many years, including in Stockholm: *"the successive administrations did not build apartments for more than 20 years"*, comments Ann-Margarethe Livh. **Over this period, the housing stock in Stockholm also suffered from a policy involving municipal housing companies selling public housing to tenants**, with a view to financing the creation of new housing made more expensive than in the past by rising construction prices.

This slowdown of construction and the implementation of this public housing sale policy occurred alongside a new period of demographic growth: the population of Stockholm County rose by 350,000 between 2005 and 2015¹⁰.

Concomitantly, many factors contributed to the attrition of housing stock, including the scarcity of land to be developed and the restrictions of some local regulations, which hindered the creation of public housing by municipal housing companies¹¹.

These circumstances were a recipe for a new housing crisis. 255 of Sweden's 290 municipalities now report a housing shortage¹², and only 44 of the 255 will exit from a shortage situation within three years¹³. At the same time, *Boverket*, the Swedish national board of housing, estimates that 88,000 new homes must be built each year in Sweden until 2020 to meet current demand¹⁴. The European Construction Sector Observatory has noted that there is currently *"a structural undersupply of dwellings in Sweden despite the high levels of dwelling construction in 2016 and 2017 (63,100 new starts, +34% compared to 2015; 76,000 new starts in 2017, +20.4% vis-à-vis 2016)"*, and added that *"this situation led to significant increases in house prices, with the house price index soaring by 47.1% between 2010 and 2016 and 8.6% between 2015 and 2016 alone"*¹⁵. Swedish rents rose by 10% between 2014 and 2015¹⁶.

The consequences of this shortage include a lengthening of the average waiting time to obtain public housing in Swedish towns and cities, which currently stands at 5-10 years for a low-rent apartment in the older housing stock, even in outlying districts. **At the same time, "rents in new constructions have been rising every year and are today around twice as high as rent in the older stock"**²⁰.

Another tangible effect of the housing crisis is the increasing difficulties that young people are facing to leave the family home and the resulting increase in the average number of adults per household: 25% of young Swedes aged between 20 and 27 currently live with their parents, as opposed to 17% in 1995²¹. **The significant amount of time required to obtain public housing and the increase in housing prices have led to a prosperous black market characterised by an increasing number of sub-lets, which are illegal but rarely prosecuted and punished**²²: *"If you have a first-hand contract with a relatively low rent, you have a valuable asset, and this can be traded against other apartments, but it might also be possible to sell it on the black market"*, explains researcher Hans Lind²³. These practices result in a reduced number of housing units returned to the public stock and which are currently pending allocation, meaning that in Stockholm less than 10,000 apartments per year are allocated through a municipal waiting list.

The Swedish housing stock

The Swedish housing stock can be broken down as follows:

40.7% of housing is owner-occupied, this represents individual housing generally located on the outskirts of major cities.

22.8% of housing is cooperative, which is an alternative to private or public housing, based on the principle of open membership, democratic administration and cooperative teamwork. Today, cooperatives account for the majority of new collective housing construction. The incomes of occupants of cooperative housing are greater than the national average.

18.9% of housing is public rented: this is for the most part housing managed by municipal housing companies, which function as non-profit limited companies *"with their own boards and day-to-day operations outside the purview of direct political control"*¹⁷.

These apartments, most of which were built during the Million Programme, are open to all inhabitants of any municipality, regardless of their age and income level. Their share in the housing stock is currently in decline: falling from 23% in 1990 to approximately 18% in 2016. For instance, more than 100,000 public apartments have been converted into cooperatives in the centre of Stockholm¹⁸. Lastly, the authorities which manage Swedish public housing *"do not receive any specific assistance"* and must now *"achieve a financial balance under the same conditions as owners of private housing stock"*¹⁹.

17.6% of housing is private rented.

Public rented housing in Sweden

Swedish law states that each municipality must provide housing for its inhabitants. In reality, this obligation is conducted through the administration, by municipality-owned public housing companies, of housing stock allocated to inhabitants, regardless of their income, based on time spent on a specific waiting list.

The law also provides for a procedure which is highly favourable to tenants, in particular through a rent regulation system. Rents are set annually following negotiations between owners (municipal housing companies) and tenant representatives (in particular the Swedish tenants' union which represents 350,000 inhabitants)²⁴. According to Swedish law, the rent must be reasonable; it is negotiated on the basis of the utility value (*"bruksvärdesystem"*) of the apartment and changes to maintenance costs in the building.

It should be noted that rents in the private rental housing stock are generally set in a similar way to those in the public rental stock, for comparable dwellings. *"This process puts private operators at a disadvantage as they are forced to offer rents lower than the market price without being able to rely on municipal financial support to cover maintenance cost increases"*, writes researcher Hans Lind²⁵. The Swedish system therefore has the specific

feature that the public housing stock and the private market compete to secure the same potential tenants.

Today, the long waiting periods to obtain public housing have resulted in the development of a sub-letting black market estimated at €128 million on a national scale. Unreasonably expensive rents also incite households to turn to occupant ownership, which further increases purchase prices, especially in major cities such as Stockholm. Yet *"the paradoxical situation is that, even if owners have relatively low housing costs – and relatively cheap apartments are available in some suburbs – it is almost impossible for low-income households to buy these cheap apartments. As the buyer must make a down payment of 15% and be able to pay an assumed interest rate of 6–7%, low-income households will not get a loan that is big enough"*²⁶, states Hans Lind.

Fig. 2:
view of the Stockholm
waterfront.



Stockholm: a critical shortage of affordable housing

“In the coming years, we will have to hire thousands of people. Our success is entirely dependent on our ability to attract the best talent in the world. [...] The first obstacle, as we have already stated many times, is housing availability”: this is how Daniel Ek and Martin Lorentzon, founders of Swedish company Spotify²⁷, are seeking to draw attention to **the acuteness of the housing shortage that Stockholm is currently experiencing and the devastating consequences it may have on the economic attractiveness and vibrancy of the Swedish capital**. This shortage which is affecting Swedish municipalities is at its most acute in Stockholm: **the number of people registered on the waiting list of the Stockholm municipal housing company has risen from 100,000 in 2000 to 580,000 today, for a total population of 940,000 inhabitants**. The average waiting time on this list is currently 12 years and stretches to 15 years in the most sought-after districts. In 2016, 40,000 people were added to the list while in the same year only 6,900 new apartment rentals were brokered by the Stockholm public housing company²⁸. It is currently estimated that *“the housing stock needs an increase of 9,000 to 13,000 units annually”*²⁹ in Stockholm. Faced with this need, Stockholm is currently only building 4,000 housing units per year³⁰.

In addition, rents in newly-built housing are currently much higher than in the past. Jonas Högset, Director of Real Estate and Housing at the Swedish Association of Municipal Housing Companies (SABO), explains that:

“ If the average rent is in the region of 1,050 SEK [€100] per square metre per year in Sweden, it is now roughly 1,500 to 1,600 SEK per square metre per year [€142 to €152] for new constructions. This is a huge difference. If we can talk about insiders and outsiders in this system, the insiders are Stockholm’s tenants”.

Stockholm’s housing stock – key figures³¹

452,600 housing units

504 housing units for 1,000 inhabitants

45% of housing is rentals

Vacancy rate: 0%

Share of Stockholm’s housing belonging to municipal housing companies: 1/3

The arrival of many asylum-seekers beginning in 2015 has further heightened this shortage, revealing an underlying structural crisis. Göran Johnson sums up the current situation in Stockholm as follows:

“As a consequence of revised housing policy in the 1990s, housing construction fell to around 3,000 flats annually in the middle of the decade. This level was far too low from a long-term perspective, which led to population density starting to increase for the first time. When demand for housing once more began to rise, it took several years before construction started to catch up. The result was a housing shortage and soaring house prices. It was not until recently that housing construction once more began to approach the level of 10,000 flats a year, with population growth in the region of 20,000 inhabitants a year. The trend has been an increase in housing construction until the global economic crisis started in 2008, but the trend is now slowing down again”³².

The shortage in public housing stock has led some to give up the notion of renting a property and to turn to home ownership instead. Yet purchasing a home has also become unaffordable for low-income households and even medium-income households living in Stockholm, where only luxury housing is built to be sold. Jonas Högset analyses the situation: “We are witnessing a rapid rise in prices for the existing housing stock, which have quadrupled since the 1990s. When investing in a condominium, you know that you can spend an additional million because it will be worth two or three in three years. This means that a great number of investments are focused in this condominium segment. Everyone wants to own an apartment because it is the best investment to make. The money is almost free, so those who can invest do so actively in this market. A construction company or developer, regardless of whether they are competent, will always make a profit, because there will always be a market. This is what drives the prices up”.

In light of this situation, Stockholm announced in 2014 an ambitious programme to build 40,000 housing units per year, based on the municipality’s significant control of land (it owns 70% of the land in the capital). A programme to build municipal rental housing with limited rents, known as “*Stockholmshus*”, was the first initiative in this new approach. The municipality consulted several companies to build 1,000 apartments, selecting those able to provide a quality product at the most competitive price. The selected companies, Svenska Bostäder and Familjebostäder, are currently building 3,500 to 5,000 dwellings by 2020 “*without sacrificing either architectural*

or technical quality”, explains Eva Nygren, President of Stockholmshem³³. The completed apartments are in line with the features of neighbouring buildings so that they fit into their surroundings. Links between the selected areas and public transportation infrastructure have also been considered for each project. “*It is too early to say that the programme is a success*”, notes Ann-Margarethe Livh; “*we are in the trial phase and the first apartments were only inaugurated six months ago*”. Yet the Vice-Mayor responsible for housing admits that the rents of the “*Stockholmshus*” remain beyond the means of the lowest-income households: “*Even these apartments will not have rents low enough that the really underprivileged households could afford them. We must of course build more ‘Stockholmshus’*. Through them, we will be able to resolve the problem for many low-income households in Stockholm (teachers, nurses, etc.). However, the more underprivileged (pensioners, etc.) will still not be able to afford the rent. The public sector can do much but it cannot do everything”.

Fig. 3:
volunteers welcome
asylum-seekers at the
Stockholm central station
in September 2015.

Low-income households, neglected by the notion of “dwellings for all”?

The more urgent and critical need for affordable housing in Stockholm currently concerns around 80,000 people with very low incomes.

“At the moment, we have 80,000 people in Stockholm with an urgent need for housing. These include persons aged 35 who have no choice but to live with their parents, large families in apartments which are too small and people in housing on the black market”, explains Ann-Margarethe Livh. Anna Granath Hansson, researcher at the Kungliga Tekniska Högskolan in Stockholm, confirms that “the unmet housing demand derives from all types of households, though low-income groups are hit the hardest”³⁴.

These particularly vulnerable populations include young people, pensioners, single-parent families and also refugees who have arrived in the Swedish capital following the migration crisis in 2015.

While municipal companies have found housing for the 7,000 refugees in Stockholm by leasing temporary accommodation centres to the Swedish Migration Agency, they are now faced with the issue of securing long-term housing solutions for these people: many refugees arriving after 2015 are currently forced to remain in temporary accommodation as they are unable to obtain public housing. *“We have resolved the situation for refugees, but only temporarily”, admits Ann-Margarethe Livh. “For young refugees coming from Afghanistan for example, we built very small temporary accommodation which has proven too small for some. They would like other housing, as do the refugee families who are currently living in two-room apartments when there are four or five family members. We have made sure that nobody ends up on the streets but we are facing a crisis today”.*

According to Anna Granath Hansson, this situation will not be easy to resolve:



“ We will soon find ourselves dealing with chaos. Refugees have no chance to find housing on the regular housing market. Even though the migratory flow has almost dried up, it is still adding to the problem, which is already huge. We have no solution in place. Where are they supposed to go when they leave temporary accommodation?”

Jonas Högset confirms: *“the apartments being built today in Stockholm are far from affordable for refugees, even if they are subsidised. It is a very difficult situation”.*

Stockholm is failing to build housing that is sufficiently inexpensive to be accessible to these underprivileged populations and in sufficient quantity to contain the rising housing prices. This may be predominantly due to housing construction costs in Sweden. In 2015, these costs were 65% greater than the European average: **Sweden has the highest construction prices in the European Union**³⁵. *“Building a multi-dwelling building*

*currently costs almost two and a half times more than it did in the mid-1990s, while other price trends were just over 30 per cent for the corresponding period”, notes SABO*³⁶. From 2006 to 2016, the construction cost per square metre increased from 22,000 SEK to 42,000 SEK (€2,093 to €3,997) on a national level, while in Stockholm, these costs soared to 49,000 SEK (€4,665) on average. This increase is only partially due to the price of land, which is currently circa 10,000 SEK per square metre on average³⁷.

How can housing be built more quickly and at a lower cost in Stockholm?

How can construction costs be reduced sufficiently to facilitate and encourage the production of affordable housing in metropolitan areas under pressure such as Stockholm? According to some experts, one avenue would be **to slacken the regulatory restrictions applicable to housing construction and to simplify its architectural form**. Some are calling for reduced accessibility or a limited use of housing to cut its production cost. Anna Granath Hansson explains the debate currently underway in Stockholm:

“**Debate focuses on what is really needed when talking about simple housing. Is it possible to build apartments with only the bare minimum in them? There may not necessarily be a basement, a laundry room, a parking space. On this basis, it is possible to produce housing for much less. It remains highly controversial but is a necessary discussion**”.

The idea of designing housing without parking solutions to reduce the cost is particularly interesting as the Stockholm Centre for Transport Studies estimates that *“about half of the construction costs for a parking space in a garage (only one floor) are covered by the parking fee, the remainder is funded through increased rents on the apartments. This corresponds to approximately 700–1,500 SEK per square meter which represents about 5% of the apartment’s value”*³⁸. The idea has generated considerable controversy, that Jonas Högset deems unjustified, particularly as these apartments are aimed at low-income households which, in many cases, do not own a vehicle. *“The pooling of garages in major cities is an interesting avenue for cutting costs”,* notes Jonas Högset, *“but we must remember that car parks are generally not there for rental apartments but rather for privately owned apartments. Removing them would therefore not affect the price of rental apartments”*.

This trend to simplify housing also includes a growing interest in prefabrication and standardised production. Mass produced housing is even, according to Jonas Högset, vital for the survival of companies in this sector: *“I think that many companies which are currently active on the market will not be around in ten or fifteen years. They will be unable to convert their model to streamline their costs. To be able to cut spending by 50%, you need a radically new way of thinking and to industrialise the production processes”*. **Stockholm is now exploring such**

avenues, in particular for young adults, for example with low-cost, series-built modular housing but *“these are generally built where land is cheaper and the resistance to new building projects is not as strong, i.e. rather in municipalities outside Stockholm or in the less attractive suburbs”,* explains Anna Granath Hansson. Moreover, **these products are aimed at specific populations: refugees, students, young people, etc.** It is still a far cry from an affordable housing solution aimed at low-income households in general and which would be rolled out in Stockholm itself, exactly in the districts where there is currently hardly any affordable housing. **It should also be noted that these solutions are given temporary planning permission lasting around fifteen years, and are therefore not a long-term solution for affordable housing:** *“It is quite expensive because the lifespan is too short to motivate investors, but housing must be offered quickly to young people so it is being built on temporary sites”,* explains Anna Granath Hansson.



Fig. 4:
vehicles parked outside
residential buildings in
Stockholm.

One of the most compelling examples of standardised and mass-produced housing construction which has generated affordable housing comes from SABO, an association federating the 300 municipal housing companies in Sweden. In light of the soaring construction prices at the end of the 2000s, SABO designed **Kombohus**, a standardised and unique method to produce apartments 25% below the market price, with a view to providing a “good and affordable alternative”³⁹ for housing. Designed in 2010, the programme has brought about the production of 9,000 housing units since its launch, purchased by 300 municipal housing companies and built in around 100 different municipalities. **A Kombohus construction time is eight times shorter than that of normal housing**, resulting in significant productivity gains and providing an effective response to the twofold question of how to build at a lower cost and a faster rate, with prices not exceeding €1,200 per square metre for surfaces above the foundations.

This industrialised production does not mean, however, that there is any drop in the applicable standards. “These are the functional requirements that we have set”, explains Jonas Högset. “Turnkey housing blocks with an interior staircase, a lift, limited energy consumption and the possibility of building two to six floors with four apartments of two to three

rooms on each floor”. SABO has also imposed high energy requirements. “This is a very stringent requirement and construction companies have shown that they are coping with this while still delivering buildings at a lower price”, notes SABO⁴⁰.

The simplified architecture and uniformity of the housing produced makes the product less attractive than unique and custom-built housing to higher-income households, thereby guaranteeing that the *Kombohus* is accessible to low-income households, even despite the lack of an income threshold typical in Swedish public housing. “It is a radically new model”, remarks Jonas Högset. “The problem is that in Sweden, as in Germany, there is a history of large-scale construction projects, with the ‘Million Programme’ in Sweden and the German ‘Plattenbau’. Nobody wants this anymore, but in our opinion the *Kombohus* is totally different. It can be part of small-scale projects and can be a perfect fit in the existing community”.

Researchers from the University of Stockholm have observed the positive effect of these products on the average property prices in the districts in which they are built: “Many older people are selling their detached homes and moving to new, accessible rental properties that are easy to look after. Families and couples are buying the houses that they are selling”⁴¹. This may be one way to solve the problem that is often highlighted

in the Swedish media of sub-optimal use of the existing housing stock, particularly due to people living alone or in housing that is much bigger than the average.

If the trend to prefabricate housing and industrialise its production suggests a possible fall in construction prices and a ramping up of housing construction, this is not yet sufficiently significant to enable the most underprivileged residents of Stockholm to access affordable housing.



Fig. 5: Example of a *Kombohus*.

Public housing vs. social housing

Sweden has a public housing system which, in the spirit of its social democrat fathers, must champion a universal conception of housing rather than a residual vision of public housing stock intended for underprivileged households, as is the case in the social housing systems traditionally in place in Southern European countries and in France. **Sweden therefore does not have a social housing system in the strictest sense of the term**, defined as a type of subsidised housing aimed at low-income households, and **Swedish municipalities must, under Swedish law, provide housing to all their inhabitants, regardless of their income**. The apartments rented by municipal housing companies are open to all and are granted to those who have spent the most time on the waiting list, to which everyone can sign up. *“The main difference is that the perception of public housing is a tenure form open to everyone and often on a level playing field with private housing”⁴²*, explain Lena Magnusson and Bengt Turner.

While there is a special scheme for persons in great financial difficulty, its reach is extremely limited: some 30,000 social contracts enable such people to live in apartments which are not popular as they are too expensive or are located too far from the centre. The municipality therefore signs a contract with an average term of two years with the municipal company in charge of the housing. While these contracts are available only to persons in financial difficulty, the Stockholm Social Services Department is currently seeing an increasing number of people who are not in this category but who are unable to find housing in the public housing stock.

The Swedish public housing system is the embodiment of the “dwellings for all” concept: *“One of the ideological cornerstones in the Swedish welfare state is the idea of equality between different families despite demographic, socio-economic and ethnic characteristics, as well as where they live”⁴³*, explain Lena Magnusson and Bengt Turner. As a consequence, there is only one housing project in Sweden that could be defined as social housing: in Gothenburg, the municipality sells properties it owns on the condition that developers set a rent lower than the market rate for 15 years for part of

the housing built. *“These below-market rental apartments should then be allocated to households according to special criteria. Even though these have not yet been determined, an income limit is probable”⁴⁴*, explains Hans Lind.

Yet the Swedish system, aimed at providing housing for wealthy and underprivileged households equally, was not designed to cope with a period of shortage and demographic growth such as Sweden is experiencing today and is no longer able to fulfil this goal.

“Paradoxically, the policy that provides housing for all [...] creates advantages for higher income people because even people who can afford to buy or rent an apartment in the private market can get a less expensive public housing unit”⁴⁵, notes Beacon Pathways. Jonas Högset adds: *“the problem is that today our ‘housing for all’ system no longer offers, paradoxically, housing for all”*. The municipal housing companies are now caught between two conflicting goals: to accommodate vulnerable families (as well as higher-income households) and to be efficient from an economic point of view, at a time when construction prices are peaking⁴⁶.



Fig. 6:
Stockholm's Rinkeby
neighborhood, marked by
the Million Programme.

This situation means that an increasing number of people in Stockholm have no access to either contract housing aimed at highly vulnerable populations in financial difficulty or to public housing at constantly growing prices. *"It is very difficult for low-income households to find affordable rental housing, because both private and public apartments are allocated on the basis of waiting lists, the average waiting time is 12 years and very few affordable apartments are put up for rent. In addition, households which have been on the waiting list for a very long time may not be accepted as tenants as their income is deemed too low or unstable",* explains Anna Granath Hansson. **It is common to require from potential tenants income that is several times higher than the rent, references and evidence that there is no history of rent arrears**⁴⁷. Speaking of this system, Beacon Pathways notes that *"far from providing housing for all, Swedish municipal landlords actively avoid housing the poorest and most vulnerable households – at least from the more popular stock"*⁴⁸. Some municipal companies even refuse to rent housing to households on welfare, hiding behind a provision in Swedish law that entrusts them with a commercial objective. This means that some low-income households, unable to find housing in the public stock, are forced to turn to municipalities' social services departments in the hope that they will assist them in finding housing belonging to a private owner or a municipal housing company. Conversely, others resort to the black market, where they can obtain second-hand contracts which are often very expensive, or decide to share housing, generally with no legal security. *"Some people live 300 km from Stockholm and travel there every day to work and sleep in their cars",* explains Anna Granath Hansson.

The current affordable housing crisis in Stockholm and other Swedish municipalities therefore stems from the gradual failure of the Swedish "dwellings for all" model, which explains the escalation of fierce debate between those in favour of a social model akin to the Vienna model and champions of the underlying egalitarian conception of the current model. Jonas Högset advocates a continuation of the current system:

“ If you accept the principle of housing for all, it also means that many construction companies work for all market segments, both low-cost housing and luxury housing. If you exclude high-income households, the system is no longer housing for all, it is social housing. The current system also brings a social mix to the existing housing stock. We believe that our existing housing for all model remains much more beneficial to the Swedish people than the creation of a new system would be. We are not going to become like Vienna”.

Conversely, according to Anna Granath Hansson, social housing is suffering from the tarnished memories of the Million Programme or the negative image of housing for low-income households in some suburbs of European capitals: *"if we want to consider social housing, we must see how it is implemented in Northern European countries today. I think that there are districts that are stigmatised in all countries, but today we can take different action to avoid such situations"*.

The option of potentially reforming the current system is, however, coming up against fierce resistance. *"The city of Gothenburg attempted to roll out a social housing project in a highly attractive area near the Gothenburg port",* says Anna Granath Hansson. *"Only high-income households settled there because the prices were high. The city wished to improve the social mix by enabling low-income households to move there. Politicians have blocked the implementation of this project, the first inclusive housing project in Sweden, in particular under pressure from the tenants' association – but the city has not given up yet"*.

These reservations are more keenly expressed by Swedish public opinion because the shift from a public housing system for all to a residual social housing system would be costly: *"We have calculated the annual cost of moving to a social housing*

system", explains Jonas Högset. *"It is estimated that it would cost the Swedish State €1.5 billion per year to transition to a social housing system similar to that in other European countries"*.

Yet social housing may well arrive in Sweden from an unexpected source, as, although municipalities refuse to allocate housing on a means-tested basis, the same cannot be said in the private sector. *"Private developers are starting to say that they are not subject to this obstacle of housing for all and are starting to express an interest in social housing",* explains Anna Granath Hansson, particularly as the production of expensive housing, which was previously the bulk of the sector's production, is now facing a stagnation and even a drop in demand. *"Prices have risen very quickly, but today they seem to have peaked in Stockholm, where it is becoming more difficult to sell property",* notes Ann-Margarethe Livh, former Vice Mayor of Stockholm responsible for housing. Anna Granath Hansson confirms: *"there is no longer a demand for very expensive housing. Today, many companies in the construction sector are starting to look at the more affordable segment of the market with a view to making the transition"*.

An uncertain future

Clear-headed as to the extent of the crisis, Stockholm knows that it has not yet found the solutions that will resolve the shortage of affordable housing it is suffering from today. *“For now, we do not know if we will successfully resolve the problem”,* admits Ann-Margarethe Livh. *“We know that we must tackle it, but as yet we are still considering the means with which to do this”.* A result of past decisions – no construction projects for almost 20 years, the sale of many public housing units to their occupants –, **the shortage in Stockholm can only be resolved through a long and sustained period of construction of affordable housing, itself subject to a structural decrease in construction costs, which are disproportionate today, specific to Sweden.** Lastly, attempts to resolve the shortage of affordable housing must come together with a **reassessment, on a national scale, of the past decision to create a universalist public housing system which is today reserved for the wealthiest households.**

London

Building affordable housing in
London: utopia or project?



“Londoners know better than anyone that our city is in the grip of a major housing crisis – they live with the consequences every day”, wrote Sadiq Khan in October 2017 in an opinion piece published in the British daily newspaper The Guardian¹. London has been one of the most expensive European capitals for many years, and while purchasing a home currently costs a UK inhabitant 7.77 times their annual earnings, a Londoner would have to spend 13.24 times the average earnings figure to hope to purchase housing in the British capital². This situation stems from the UK’s adoption in the second half of the 20th century of a policy which actively incited homeownership, supported by favourable tax treatment and access to credit.

From simply being a place to live, **housing has become the critical component of an asset-building strategy in preparation for retirement for British households**. “Many UK households now have a personal interest in the maintenance and further growth of prices”³. Against a backdrop of soaring housing prices in the UK, it is paradoxically difficult, on a political level, to come up with strategies with the clear aim of driving down prices. This shift to considering housing as an asset is in itself a factor behind rising property prices: “The problems of affordability, which so many cities and rural areas now confront, stem from the fact that the inherited stock of housing changes hands as assets, at prices which bear no relation to original costs of building or the costs of replacement”⁴. **A very pronounced decline in the production of public housing bringing construction to a standstill, compounded by policies to sell such housing to occupants** (Right to Buy, see below), completes the picture.

In the 1950s, **housing in the UK cost on average four times the average annual salary. By 2008 this figure had jumped to eight**. In addition to price increases, these statistics demonstrate a stagnation in income which, together with the increasing consideration of housing as an asset, **fuelled growing inequalities which are now concentrated along a generational axis**. The baby boomer generation, most of which are homeowners who have fully paid off their mortgage, are now enjoying relatively limited housing expenses and good housing conditions. This is still not the case for those under the age of 50: due to difficulties in becoming homeowners, young households are generally tenants (in private housing stock). If they are homeowners, they are obliged to repay their mortgages through hefty monthly instalments. Overall, **their housing costs are much higher than those of baby boomers**. It is estimated that the generation currently aged between 18 and 35 years will still not have purchased a home in 20 years and their ratio of income⁵ will remain high.

In London, this trend indicates a constant decline in the homeownership rate since the year 2000, falling from 69.6% in 2002 to 63.6% in 2013⁶. Private housing stock is also becoming less and less affordable for low-income households (in particular of younger generations), while at the same time their income is not increasing as quickly as property prices⁷. **Some people can therefore**

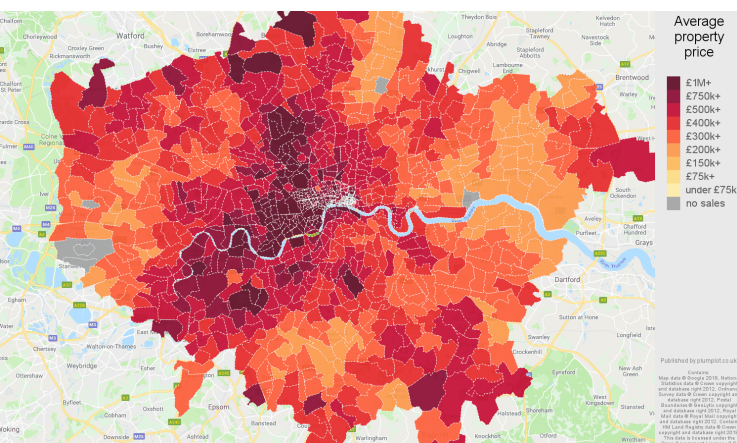


Fig. 7:
map of residential real
estate prices in London.

no longer house themselves in the market sector due to inadequate income (salaries or pensions), rising house prices and the regional imbalance of supply and demand⁸. In many cities, the private rented sector has consequently become the only source of housing both for those who would have preferred social housing and many who had hoped to buy⁹. In 2014, private rented housing accounted for 17% of the total UK housing stock.

London, a victim of its own popularity?

The population of the UK capital rose by more than 27% between 1991 and 2016 and is set to reach 10 million by 2030¹⁰. Fuelled by an attractive labour market and London's economic dynamism, this demographic growth has also led to an **increased demand for housing, which the slow developing existing residential stock is struggling to meet.** In London, housing stock has only grown by 8.5% since 2006 – i.e. only around 65% of the growth in household numbers and 50% of the growth in population over the same period¹¹, while only 24,180 new units were completed in 2016 when population projections suggest that a minimum of 50,000 units need to be built annually just to meet demand¹². *"London has been very successful at creating jobs,"* explains James Murray, Deputy Mayor for Housing and Residential Development, *"and relatively unsuccessful, in fact a failure, at building homes. In the last 20 years, jobs have gone up by about 40% in London, but the number of homes has gone up by 15%".*

An overlapping of physical and regulatory restrictions weighs down the housing

supply in London, and is the cause of the slow development of the city's residential stock. The first of these restrictions is topographical: *"all major cities are surrounded by massive green belts, so London cannot grow horizontally,"* explains Christian Hilber, professor at the London School of Economics. This is compounded by the regulatory limit concerning the height of buildings in most London boroughs. The capital therefore cannot expand horizontally or vertically, and *"if the housing can't expand, then prices go up"*, notes Christian Hilber. Another regulatory constraint is the requirement to protect heritage buildings, which hinders the development of housing supply in London: *"In Westminster, 98% of all land is developed. Let's say 2% are public parks. Essentially the only way to add housing is by knocking down a building at higher density, which is extremely difficult in Westminster because almost everything is preserved"*, states Christian Hilber.

These regulatory and physical limitations prevent housing supply from rising to a level which would enable it to meet the soaring demand: *"The shortage of affordable housing results from an imbalance between supply and demand. London being a very attractive city means demand is exceptionally high, and the UK has a long-term supply problem"*, explains Luke Murphy, Associate Director for the Energy,

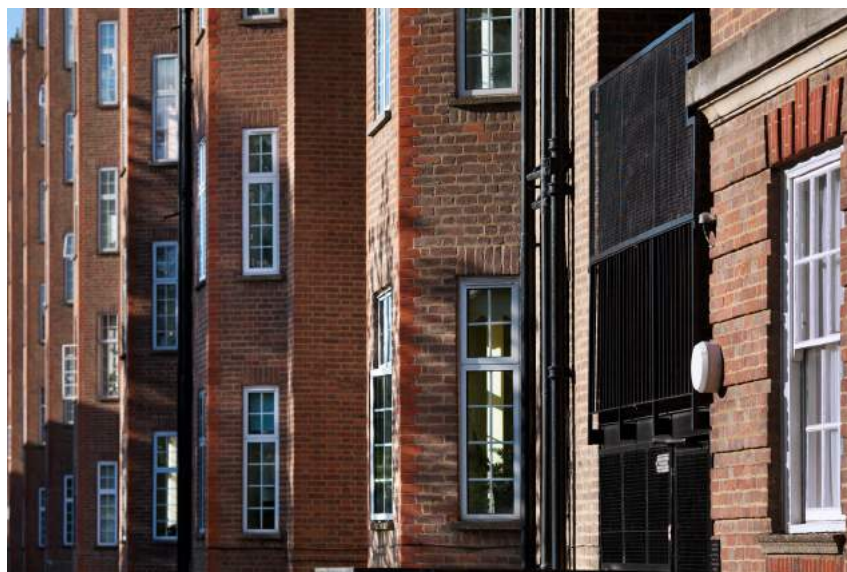


Fig. 8:
Residential
buildings in
London.

Climate, Housing and Infrastructure Team at the Institute for Public Policy Research (IPPR). Christian Hilber confirms: *"The main reason behind the shortage is about supply and demand. London is one of the few superstar cities in the world. It's a very desirable place to be for many high-skilled people. The question of whether this demand will lead to extremely high prices and rents depends on whether or not it is easy to create supply, whether it is possible to add housing"*. Housing prices, which are at the intersection between supply and demand, are what they are today because the demand for housing has the specific characteristic of being highly inelastic – nobody would agree to go without it, even at a significant financial cost. This means that, in a housing market such as in London where there is low supply and high and growing demand, the equilibrium price is clearly particularly high.

This simple economic statement is the root of a number of trends observed in London, often cited as evidence of the housing crisis: the increasing number of adults per household, indicating that some adults are living longer with their parents, the decrease in the average surface area per person, the clear rise in households' ratio of income and the increased average age for first-time buyers, all demonstrate growing difficulties when purchasing a home. Another consequence of the rising prices and the shortage of affordable housing is the vacancy rate which is virtually zero, indicating an almost perfect alignment between the number of existing housing units and the number of households, depriving the housing market of the variable for adjustment which allows it to operate effectively¹³. These trends were exacerbated by the 2008 financial crisis: property prices in London are now 50% higher than they were prior to the crisis.

The Greater London Authority's affordable housing policies

Policies rolled out by the Greater London Authority in favour of affordable housing include two initiatives aimed at tenants:

The London Affordable Rent is aimed at low-income households selected by the borough councils; housing is provided by housing associations at rents that are slightly higher than social rents.

The London Living Rent strives to encourage medium-income

households to save towards homeownership¹⁵. Households with annual incomes lower than £60,000 are incited to save with a view to purchasing their home through rents equivalent to one third of the median household income in their borough of residence.

This increase in property prices feeds into a vicious circle: *"The very fact that property prices and rents rise relatively fast in some cities compared with others [...] attracts more money from investors who speculate that the relative growth will continue. [...] while it is hard to get an initial toe-hold in the London housing market, high levels of capital appreciation are anticipated by those who do and this may be a factor encouraging some to enter that market"*, notes Foresight in a report published in June 2015¹⁴.



Fig. 9:
Headquarters of the
Greater London Authority
in London.

The rapid rise in London's land value

In London, the average value of land has soared in recent years, to the extent that, today, *"the cost of land accounts for more than half of the cost of building a standard flat in a central London location, as opposed to around a quarter of the cheapest suburban equivalent"*¹⁶. As building costs vary little from one London borough to another, land prices are the main variable for housing prices in the UK capital.

The "Hope Value" mechanism is among the factors behind this rise in land value.

Luke Murphy explains as follows:

“If you're a land owner, under the current system, you can expect what is called currently the 'Hope Value'. If I have a piece of land, a field marked for agricultural use, and the local authority wants to purchase that piece of land to develop housing, it will have to pay me the value of the land as it is currently, plus something called Hope Value. If my land is worth £10,000 as a farm plot, it is worth £1 million as a plot to build housing on, and I can expect the local authority to pay me an amount closer to what it would be if I already had housing. Many countries have regulated land sale prices so that there is no Hope Value. In Germany, as soon as land is designated as somewhere for housing, it is frozen at the existing price”.

This mechanism, together with the perception of housing as an asset, contributes to the increase in London's housing prices.

The GLA faces the land consolidation challenge

In addition to rising prices, land is also difficult to use. The Mayor of London has made this one of the focal points of his strategy and **has announced his intention to conduct a policy which steps up interventions on the land market**. He wishes to *"intervene in the land market himself to secure land for a low enough cost that it can be economic to put up low-rent housing on it"*, explains Kath Scanlon, researcher at the London School of Economics. The Draft New London Plan¹⁷ does make the assertion of a sufficient land reserve in Inner and Outer London, to meet the estimated requirement of building 66,000 housing units per year, half of which would be affordable.

Yet a significant share of this land for potential development is owned by people who have no intention to sell, build on or convert their land: *"What the Draft New London Plan calculations do not consider is who owns the land and whether they intend to build houses on it. Often, the answer is no. They have plans to use it for other things, they are in another business entirely, and they are not putting a lot of energy into optimizing their land value"*, explains Kath Scanlon. **Almost one quarter of London's land is owned by public bodies**¹⁸ (nationally, 40% of brownfield sites¹⁹ suitable for development are in public sector ownership²⁰) for whom building housing is not necessarily a priority: *"It is also understandable that active management of property assets to release land for others to provide homes is a low priority for organisations delivering public services. Quite simply, for the majority, managing property is an administrative function rather than a corporate goal, and building homes is not what they do"*²¹. **However, public authorities own many unused or under-used assets which could be "redeveloped to provide better public value"**²², in particular by building affordable housing. Yet several obstacles stand in the way of successfully implementing such a strategy, starting with the insufficient growth, by the various public bodies owning land, of their own assets.

A report by a team of researchers from the University of West England notes that:

“Council records²³ are not always complete and are, in some instances, wholly absent. Moreover, they only account for one part of the public sector. They do not, for example, touch on land or assets owned by the NHS [National Health Service] in London. Furthermore, such records do not account for land or assets still in use but underutilised, whether that is a part-occupied office block, decaying housing stock in need of renewal, or [...] low-rise housing which could be redeveloped to provide more modern, high-density housing. Recent research has estimated that two million new homes could be built nationally on surplus public land. Of these, over 100,000 could be built on land owned by the Greater London Authority (GLA) group (including Transport for London)”²⁴.

The law does not oblige public bodies to disclose the list of land assets they own which are surplus to their own operational requirements. Moreover, there is no authority responsible for reviewing surplus assets or land belonging to public bodies



Fig. 10: a high-density city with scarce available land.

to assess which plots may be sold to meet housing needs. Similarly, there is no authority responsible for identifying under-used assets and to implement the necessary measures to obtain greater value from them. **The fragmentation of public landowners and their differing priorities²⁵ together with their poor knowledge of the assets they own are all factors to be resolved to enable the GLA to develop land identified in the Draft New London Plan and in a bid to grow the stock of affordable housing** in line with the Plan’s sustained densification avenue.

Another reason why the GLA is struggling to develop land is because “the public sector has a very limited role in terms of assembling land, bringing forward land and unlocking the block sites”, regrets James Murray, for whom the GLA’s current authority is insufficient to meet the objective set in the Plan, which is **appealing more for assistance from the British government.**

“The Mayor is quite clear that getting from around 30,000 housing units, where we are now, to 65,000 is not something which can be achieved just by dialling up the current model.

It requires us to support what is going now but have a complementary set of other approaches as well. It requires the national government to invest more money in infrastructure, and to give us greater powers for the public sector to build more homes directly. [...] To get to 65,000 we’d need the government to help us change the rules of the game, with more investment, with greater formal land powers”, explains James Murray. Many people stress that the GLA should have greater powers in terms of land consolidation, arguing that its status as a major landowner gives it the necessary expertise to carry out this function.

In practice, these increased powers could include the identification of public land which is currently not utilised in its boroughs:

"Government should empower the Mayor to identify the publicly owned sites in London - under the ownership of central government through to local government, including all public bodies - which are surplus to the public sector's operational needs", advises London First²⁶, which also recommends empowering the Mayor as the disposing agent for such sites.

Another obstacle to the building of affordable housing on London's brownfield sites is boroughs' control over development, which creates delays and unpredictability according to some experts. The GLA is therefore only the competent body to issue planning permission if the project under study involves the

building of more than 150 housing units²⁷. Smaller-scale projects are subject exclusively to the decision of the boroughs. There are 32 boroughs, in addition to the City of London, so therefore developers must deal with 33 different local authorities. This procedure *"acts as a disincentive to entry into the London market for those seeking to invest in or develop housing"*²⁸, in particular for small developers wishing to conduct business in several boroughs. **Some therefore believe that the government should increase the Mayor's powers in terms of issuing planning permission, leaving the boroughs with fewer powers**, in order to simplify the current process and mitigate the risks carried by developers and investors when they undertake housing projects. London First stresses that *"the Mayor is best able to balance the local interests of London's different communities with the need of the city as a whole to see a substantial*

*increase in housing supply. This suggests that the Mayor should either directly take more planning decisions over housing or be able to set tougher requirements on the boroughs"*²⁹.



Fig. 11:
map of the boroughs of
Inner and Outer London.

The Green Belt, an untapped land reserve



Fig. 12: London as seen from the Green Belt.

While the use of brownfield sites, the sustained densification strategy and the contingent attempts to optimise public land defended by the Greater London Authority will most likely allow London to develop its affordable housing stock, many experts agree that **such efforts will not be sufficient to meet the announced annual housing production objectives, and that an additional measure – albeit controversial – is necessary: the use of Green Belt land around the capital.** However, the Greater London Authority's sustainable intensification strategy is based specifically on the renewed refusal to develop this Green Belt and to use the significant land reserve it represents. **This refusal is probably motivated by the idea that London's Green Belt is a green recreational area for the capital's inhabitants,** which is even more valued with the widespread perception of air pollution issues and the difficulties of living in a highly dense urban area. This does not mean that the current make-up of London's Green

Belt should not be considered. It is far from providing a breath of fresh air for Londoners, and its origins show that it was never designed for this purpose.

According to British researcher Paul Cheshire, the development of green belts was not a deliberate strategy, but rather an accident of history. In the 19th century, European cities did away with their city walls, as the *"development of the nation-state and mechanised warfare had rendered them functionally irrelevant"*³⁰. For military strategy reasons, these walls were generally surrounded by an area deliberately kept clear. Their demolition, reminds Paul Cheshire, *"released a substantial circular ring of space around the city. Bourgeoisie civic-mindedness was just developing. The map shows what was proposed: a Green Belt if ever there was one! But only a belt by accident. It was on the space released by the city walls and not surprisingly city walls had a roughly circular shape"*³¹. In the United Kingdom, the creation of London's Green Belt, rather than

for environmental protection reasons, was the result of a proposal by Lord Meath, an Anglo-Irish philanthropist inspired by the example in Vienna who was convinced that cities *"corrupted the gene pool of the British"* and that their spread must be contained³².



Fig. 13:
the Metropolitan green
belt.

The idea was raised several times at the start of the 20th century and was finally enshrined in law in 1938 with the adoption of the Green Belt (London and Home Counties) Act, which gave local authorities the power to purchase land destined for public use. *"By the late 1940s, 20,000 hectares of land had been bought around London dedicated as public open space"*³³. After World War II, a law provided green belts for any major city wanting one. This law remains the foundation of the current British planning system, explains Paul Cheshire, and it gave power to local governments to prevent urban development on as yet undeveloped land: *"Privately-owned land, if designated as Green Belt, would remain private. While still promoted in the name of green space, in practice the Green Belt provisions in the 1947 Act just stopped anything happening – rather than creating valued recreational or open spaces"*³⁴. Although Green Belts were designed in 1947, they were only implemented as from 1955, under a Conservative government that changed their purpose: suddenly, *"no more were Green Belts to be green lungs or recreational space; they were just to stop development"*³⁵. This is still their purpose in the 21st century; **extending over 1,639,090 hectares³⁶ on a national scale today, green belts still have the primary**

objective of curbing urban spread. The National Planning Policy Framework states that *"the Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence"*³⁷. Paul Cheshire considers green belts to be *"a very British form of exclusionary zoning [...], with the effect of confining the urban poor to live at high densities in the cities and preserving the Home Counties [...] for the aspirant gentry who had got there earlier on the tracks of the suburban railway network"*³⁸.

Today, the Metropolitan Green Belt around London extends more than 40 miles (60km) from the city; 94%³⁹ of it is outside the British capital. The remaining part of the Green Belt located within the city's boundaries is in the boroughs of Outer London and accounts for 22% of all the land in the capital. By means of comparison, 27.6%⁴⁰ of London is covered by buildings, roads and railways. This provides a greater understanding of the huge land reserve that the London Green Belt represents within the city. It should also be noted that it is mostly privately owned and therefore inaccessible to the public. In addition, while

the Green Belt's environmental value is clear, it is limited to certain sites of specific scientific interest or habitats for protected wildlife species, which make up, with green areas open to the public, only 26% of London's Green Belt⁴¹. The remaining land has a variety of uses: agricultural land (59%), airfields, water treatment plants, former hospitals, and golf courses⁴² (the latter making up 7.1% of the capital's Green Belt!). *"I think it is being built up into the idea that all Green Belt land is rolling hills, beautiful. There is a kind of a myth over this land"*, explains Luke Murphy.

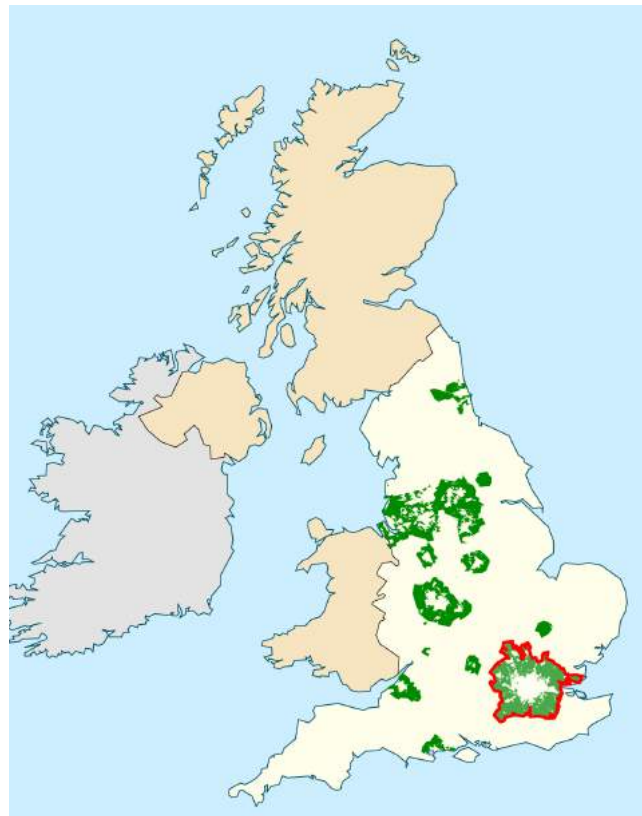


Fig. 14:
British green belts (in
red, the Metropolitan
green belt that surrounds
London).

Protecting the Green Belt (of which only 2% currently has buildings)⁴³ and the refusal to use it to unlock land for development which could create new homes are a conscious political decision made by London Mayor's Office: *"The*

argument that some have put forward that we need to build on Green Belt land, is one we do not accept, because we've identified the capacity on brownfield sites", explains James Murray, Deputy Mayor for Housing and Residential Development.

However, many observers see the Green Belt as one of the key elements in a strategy to meet the estimated annual housing demand. *"If you calculate how many houses could you build in the vicinity of 800-metre walking distance from existing tube stations in the green belt, you could build about one million homes in the Greater London area alone", explains Christian Hilber, Professor at the London School of Economics. "You're not going to get there with brownfield sites alone", he states, referring to the Mayor of London's 'Brownfield First' strategy. The Green Belt's potential to produce housing has been proven: 60% of it is within 2km of an existing rail or tube station⁴⁴, while 14 London boroughs, covering most of Outer London, have more land designated as Green Belt than is built on for housing⁴⁵.*

Tom Papworth (Adam Smith Institute) stresses that *"Green Belt policy imposes a strict limit on the supply of developable land around major urban areas. This constrains development and thus puts upward pressure on the purchase and rental prices of homes"*⁴⁶, and argues that the pressure that the Green Belt system puts on housing supply has contributed to the extreme housing price volatility in the UK in the last 50 years. **It is not surprising then that this point of the GLA's policy is highly contested by urban planners and housing experts in London.**

*"Excluding the possibility of development on highly connected or degraded greenbelt sites could result in decisions that run counter to the creation of healthy, connected and affordable communities"*⁴⁷, wrote the London School of Economics in its response to the New Draft London Plan. Christian Hilber comments wryly that:

“One may be quite sympathetic to this notion of not building on the green belt because what you probably have in mind is beautiful landscapes and areas where very rare birds are nesting, and that Londoners will go to the green belt for recreation purposes. This is not true at all. [...] It's too far away, it's too difficult to get there. It's not attractive, to a good extent it's dense agricultural land. From an environmental point of view, actually, low-density residential is probably environmentally better than that dense agriculture. And yes, we need to produce potatoes, but maybe not just outside of the city that has the worst housing affordability problems in many decades”.

Christine Whitehead, Professor at the London School of Economics, confirms that the decision not to leverage some of the Green Belt's land despite high levels of tension in London's residential stock is a "political statement by the Mayor. *From an economist's point of view, it is total nonsense. The Housing Minister and others are MPs for Green Belt constituencies – that doesn't help". Luke Murphy also confirms the political reasons behind the refusal to use Green Belt land: "there are various things in policy, including housing, which I think are regarded as too difficult to touch, and Green Belt is one of them [...]. If we could ensure that, particularly through the Green Belt, the benefit of that value and the uplift in value goes towards infrastructure, roads and schools and could guarantee more affordable housing, I think you could start seeing a different debate. But you'd need mechanisms to ensure that you get that kind of viable, sustainable, development that people will support, as opposed to just expensive three- or four-bedroom houses".*

Many have spoken out to propose potential reforms to the current Green Belt system with a view to releasing land to ease the strain on residential stock.

Some recommend a complete abolition of the Green Belt, "a step which could solve the housing crisis without the loss of any amenity or historical value" and would "enable towns once again to grow organically and spontaneously and people to live nearer to their jobs"⁴⁸. Another solution, championed by Professor Paul Cheshire, would be to extract land from London's Green Belt located within a ten-minute walk of a tube station, which would release enough land to build one million new homes. The question is, however, whether the housing crisis will become so critical that it will overcome political resistance to use this land.

Housing construction: a highly concentrated sector

In the UK, local authorities have a long-standing key role in affordable housing.

*"Since the Second World War, we have only ever met housing need with a significant contribution from the public sector. Between 1948 and 1978, local authorities built an average of 90,000 council homes a year, but by the 1990s it was next to nothing", writes Luke Murphy. "Research by the Institute for Public Policy Research last year showed that 92 per cent of local authorities were failing to build the number of affordable homes their areas needed"*⁴⁹. A clear indicator of this trend, **the boroughs, which once were major producers of affordable housing in London, have gradually distanced themselves from this role**, in particular under the council housing sale mechanism introduced by the 'Right to Buy' policy of the Thatcher government which *"resulted in 1.3 million households purchasing their council homes in the 1980s and 2.5 million households from 1980 to today"* reminds Hélène Steinmetz⁵⁰. **113,090 housing units moved from local authority to private ownership in the 1980s.** It is proving difficult for the boroughs to replace this housing as the council housing stock is now significantly reduced. In a more general sense, the role of local authorities in building affordable housing has receded considerably: once those primarily responsible for residential construction in London, they have only completed a negligible quantity of homes in the last twenty years. *"Now we have a much less diverse house building sector where the local authorities' provision is radically declined. You've got housing associations which are making some provision and this has certainly increased, but far less than it was in the past"*, notes Luke Murphy.



Fig. 15:
example of council
housing built in London
between 1905 and 1909.

This significant decline in house building by local authorities has made the private sector responsible for producing most new homes in London. At the same time, **this sector has become highly concentrated**, even on a national level: “The

nine house builders in the FTSE 100 and FTSE 250 hold 615,152 housing plots in their land bank, according to financial disclosures. This is four times the total number of homes built in Britain in the past year”⁵¹. In London, the production of affordable housing is currently in the hands of a limited number of major private developers.

This concentration is partly due to the complex nature of managing relations with the boroughs, each of which has its own administration and plan. As a result, the sector is broken down into small companies active in a single borough and “*very large developers, able to throw the necessary resources, albeit at some cost, in dealing with multiple planning authorities*”⁵².

These private developers focus on large-scale housing projects, the value of which is provided by housing sold at relatively high prices on the open market at a pace that some observers deem too slow. **Nationally and in London, this sluggishness is often considered to be a compounding factor of the housing shortage**: “*Developers tend to release completed dwellings on to the market*



Fig. 16: construction work in East Village London, former olympic village now home to 2,818 housing units (incl. 1,379 affordable units).

in each development site at a speed which maximises their margins — a speed which may be much slower than had been assumed by planning authorities in compiling their forecasts and targets [...] It has not been in the power or in the interests of house building firms to lower land prices or to secure a steady supply of cheap land and thus create conditions for mass-production of the dwellings which are needed: to do for housing what IKEA has done for furniture”⁵³. **It is not in the interests of developers to deliver their housing in extremely short timeframes, as the Housing Finance Institute notes:**

“ Developers need a pipeline of land because the process of buying all the required land, obtaining planning permission and building out a site can take years. [...] House building is labour intensive, and with large sites there needs to be a steady flow of work for the various skills that are required rather than, for example, trying to install bathrooms or kitchens in 4,000 units that are exactly the same time. And, sensibly, developers do not aim to complete a large site all at the same time because local markets cannot absorb a huge increase in supply at prices that make a development worthwhile”⁵⁴.

A group of researchers from the London School of Economics have shown that “even on sites that will eventually have thousands of homes, developers usually sell only a few hundred a year”⁵⁵. It should also be noted that local housing markets “cannot absorb a high volume of new supply without reducing prices so much as to threaten the viability of the scheme. [...] This is therefore a risky business requiring significant capital and can be done only by large companies”⁵⁶.

This sluggishness in turn feeds into suspected land speculation, further bolstered by the fact that 210,000 cases of planning permission granted in London have not yet resulted in any building.

Developers are often accused of acquiring and then holding land with development prospects “until it can most profitably be used, the timing depending upon the spatial evolution of prices and their fluctuations”⁵⁷. Yet this problem must be put into perspective, as **it is not so much the developers who conduct such practices, but rather investors**: the Molior report published in December 2012 notes that “45% of homes for which permission had been gained would not be built because the companies that had secured them were not actually in the building business”. Owner-occupiers, historic land owners, government, investment funds and developers “who do not build”, were listed⁵⁸. At the same time, as The Guardian reports, the Molior report states that “if work on every site for which planning permission had been obtained at that time began immediately ‘somewhere between 50,000 and 70,000’ homes would be completed for each of the ensuing three years”⁵⁹.

Based on the twofold observation of a concentration in the housing production sector and the slowness of building completion, deemed to be factors which explain the broadly insufficient supply of affordable housing, the GLA has set an objective to diversify the construction sector: “From my point of view, the key thing to keep us building is to shift away from this expensive market housing-driven system. And to have a lot more different actors, councils, associations, institutional investors, as well as the big builders”, explains James Murray, Deputy Mayor for Housing in London.

The GLA intends to meet this objective of diversity by tackling several points. **First of all, it aspires to become a housing builder in its own right or at the least to significantly increase its own current production.** James Murray explains as follows:

“One of the most promising avenues would be to give the public sector a greater role in directly building housing. We want to encourage the small builders, we want to encourage investors in rent and so on, but we have to have the public sector alongside that to complement it and to really increase the level of affordable housing. The private sector model is not going to double output so they recognize we need something complementary to that, which is the public sector”.

Another avenue that the GLA intends to pursue to diversify the sector is that of developing the role of SMEs in the production of affordable housing.

“Around half of all housing construction used to be undertaken by SMEs but many were killed by the financial crisis”⁶⁰. Obstacles which are currently hindering these SMEs’ access to the market include the cost of obtaining planning permission, insufficient access to financing through credit and above all **the lack of small sites, land with a surface area lower than or equal to 0.25 hectares and with capacity for up to 25 housing units.** “We want to increase the number of particularly small sites delivering housing because that creates more opportunities for small builders”, explains James Murray. The Draft New London Plan expects that 38% of the annual housing target of 65,000 homes will be delivered on small sites in the next decade. This development is set to be concentrated in the outskirts of London, with consultancy company Lichfields estimating that the boroughs of Outer London could deliver 68% of the total units on small sites.

How can boroughs unlock funds for affordable housing?

The production of affordable housing by London's local authorities, be they the GLA or the boroughs, is currently coming up against many obstacles. These include the public stakeholders' difficulties to secure funds for construction. Thus, the GLA deems the financial assistance it receives from the British government to be grossly insufficient: *"We've got a deal with the government whereby we have 4.8 billion pounds to start building 116,000 affordable homes by 2022. [...] If you look at what we would actually need to build in terms of housing, 65,000 homes a year, with half of them being affordable, we would need around four times the annual investment that we currently have"*, notes James Murray, Deputy Mayor of London for Housing.

Other key stakeholders of affordable housing in London, the boroughs' current capacity to finance the production of housing is impeded by several mechanisms. They are still unable to pool their resources to produce housing. *"Even with available funding, however, some boroughs may lack developable land at reasonable prices, whereas others have the land availability but no capacity to build. Collaboration between such boroughs could achieve better value for money"*⁶¹, states a team of researchers from the Centre for London. The introduction of mechanisms allowing the

boroughs to pool their resources would, according to some experts, optimise the financing of affordable housing by local authorities. Such pooling could involve the creation of a common fund used to purchase large sites likely to be suitable for projects with mixed uses, or partnerships between boroughs with complementary expertise.

The authors of the Strength in numbers report recommend that boroughs with development expertise and financial resources partner with boroughs with developable land⁶². In these partnerships, the GLA could take on the role of intermediary but their creation is for now impeded by the existing regulatory framework⁶³.

Council tax: the GLA's Achilles heel?

The GLA stands apart from other local authorities in charge of cities of comparable size by its narrow degree of latitude in terms of tax. “70 per cent of London’s revenue comes from central government, compared to 26 per cent in New York, 16.3 per cent in Paris, and 5.6 per cent in Tokyo”⁶⁴, notes the Centre for London. “The UK has a very centralized tax system where most of the taxes are collected at a national level”, explains Christian Hilber. “The main taxes, income tax, the value added tax, are collected at the national level. There is only a tiny tax, the council tax, that is at the local level”. **Council tax, “a local tax levied on domestic residential properties”⁶⁵, is the focus of one of the fiercest debates on affordable housing in London today.** Council tax descends from the poll tax, introduced in 1990, “a flat rate charge to be paid by every adult at a locally set rate”⁶⁶. The introduction of the poll tax proved to be a “political disaster”, as the IPPR puts it⁶⁷. The tax was believed to have shifted the tax burden from rich to poor households. A widespread campaign of non-payment as well as protests and riots ensued,

with some now citing the poll tax as the reason behind Margaret Thatcher’s resignation as Prime Minister⁶⁸. In 1994, the poll tax was replaced by the current council tax, presented as “more politically pragmatic” and which, according to the IPPR, is a “hybrid of a property-based tax, a consumption tax and a charge for local services”⁶⁹. **Properties are assigned into eight tax bands (A to H) based on their value.** “The ratios between the council tax band rates are set by central government but the overall level – via a Band D rate to which all other bands are pegged – is set locally”, i.e. in London, by each borough, which results in significant spatial inequalities which contribute to the tax’s current unpopularity⁷¹.

Income from the council tax is collected and received by local authorities (by London’s boroughs) and is one of the main sources of funding for local authorities. In London, boroughs are becoming increasingly dependent on income from this tax, in particular due to a decline in government aid triggered by a national austerity policy.

Yet “as it stands, council tax isn’t capable of meeting the funding gap – London boroughs need to make cuts of more than £540 million in 2018, yet a 1 per cent increase in council tax would raise little more than £30 million”⁷². In London, the IPPR notes that “there are 3.6 million domestic residences in London which are liable for council tax, comprising 15 per cent of England’s total housing stock of residential homes. The majority of these homes (57 per cent) are located in London’s outer boroughs. [...] London has a higher proportion of homes in the upper council tax bands as a consequence of its high house prices – 15 per cent in bands F to G compared to just 8 per cent in the rest of England”⁷³. The most common band in London is Band C (27% of housing stock); across England, Band A is the most common, accounting for 28% of homes, compared to only 4% in the capital.



Fig. 17:
Protest on 31 March 1990
against the poll tax, an
ancestor of the council tax.

Why is the council tax currently being called into question and why is it raised so often in debates on the shortage of affordable housing in London? Firstly, this tax is based on property values set in 1991, meaning that the current amount of the tax is totally uncorrelated to the real value of the taxed property. *"Absurdly, when a new build property is constructed today, there is a need to calculate what the value of the property would have been over a quarter of a century ago for council tax purposes"*, notes IPPR⁷⁴, which states *"the failure of successive governments to conduct a revaluation on the property prices upon which council tax bands are based"*⁷⁵.

Another criticism of this tax is its regressive nature, which is said to penalise low-income households. IPPR estimates that the highest value property in Band H will attract a maximum of three times the tax on the lowest value homes. This is despite the fact that a Band H property is worth at least eight times that of a Band A property⁷⁶. *"This means that as a proportion of property value, lower valued properties pay a larger proportion than higher value properties"*⁷⁷. Council tax disadvantages households living in low-value homes, while these households are often low-income households, the very ones targeted as a priority by the affordable housing initiatives conducted by the GLA and boroughs. In addition, the continued use of 1991 property values in the calculation of council tax amounts *"renders the tax base fundamentally inelastic because it doesn't increase until more homes are built or properties are revalued"*⁷⁸.

The council tax is also considered to be a cause of the growing spatial inequalities, as each local authority⁷⁹ sets the amount for Band D. Council tax rates therefore vary from one London borough to another, and *"bear very little relation to house prices"*, notes IPPR⁸⁰. The Band D rate is therefore higher in Outer London than in Central London. This reflects a combination of factors including *"local priorities and needs, the political priorities of borough councils, and the distribution of properties across council tax bands"*⁸¹.

Ultimately, the council tax curbs the production of affordable housing in London. In its current form, it places a disproportionate burden on the lowest-income households, while its inefficiency deprives the GLA of precious resources that it could reinvest in building affordable homes. According to Christian Hilber, it discourages local authorities from investing in new housing:

“ If a local authority in the UK permits development, it will receive a little bit of additional revenue through the local council tax. There are new people moving in, who will pay local council taxes, but that's a very small tax. At the same time, they must provide the infrastructure - water, electricity, roads, et cetera - and these development projects lead to more congestion on the roads, more pressure on local schools, more pressure on local services, social services, etc. Local politicians have no incentives whatsoever to permit local development. So they say, 'We have a housing crisis, we need to build more housing, but not in our borough'. That's driven by the current tax system”.

All these factors have resulted in an increasing number of people calling for a council tax reform. Some are already considering what such a reform could entail (see p.33). **Yet the political fiasco of the poll tax, which left a lasting impression, has created a high level of political reluctance to tackle such a reform, despite the highly negative view the British have of the council tax**⁸². However, a reassessment of the value of taxed properties, for example, could be a means to capture systematically any increases in land value resulting from public investment, as the GLA explains:

“ If the council tax system were reformed to be more in line with current property prices – and frequent revaluations were in place – then any increase in property prices derived from a new transport scheme or improvements to the public realm (for example) should feed through into increased tax receipts automatically”⁸³.

Some experts are even advocating a full abolition of the council tax, to be replaced by a new tax with a view to encouraging a more efficient use of land, which has become scarce in London. The Mirrlees review conducted in 2010 by the Institute of Fiscal Studies notes that *“taxing land ownership is equivalent to taxing an economic rent—to do so does not discourage any desirable activity. Land is not a produced input; its supply is fixed and cannot be affected by the introduction of a tax”*. Yet there are several barriers blocking the introduction of such a system: *“Introducing Land Rent Value Taxes is politically risky, since it requires major reform, creating winners and losers across the whole population of a defined territory. It is also practically difficult, since land in urban areas is rarely sold without existing property on it, and therefore cannot be readily valued through market prices”*, explains the Centre for London⁹¹.

The London case study is interesting as it provides an atypical example of a local authority, the Greater London Authority, which is currently ill-equipped in the battle it must fight against rising land and housing prices and the growing shortage of homes accessible to low- or medium-income households. With its limited latitude in terms of land consolidation and the inefficacy of one of the only available local taxes, the GLA is obliged to deal with many obstacles which curb its ability to produce

affordable housing itself, or at the least to encourage its production by other parties. Another major obstacle stands in its way, this time political: **the GLA’s decision not to use the land reserves in London’s Green Belt, which, if put to better use, could possibly increase the stock of affordable housing in one of the most expensive capitals in Europe.**

Possible council tax reforms

The London Finance Commission has listed several avenues for reforming the council tax⁸⁴:

- 1 **Reforming the available council tax discounts and premiums, without reforming the council tax mechanism or the tax calculation basis.** This option would remove the tax discount enjoyed by empty and second homes today, a measure which “would result in a marginal increase in total tax take (£7.5 million) and if instead, all empty homes are charged a 150 per cent premium providing an incentive to use housing more efficiently, it would raise an additional £90.1 million”⁸⁵.
 - 2 **Introducing London-specific bands, either by uprating band thresholds to 2015 property prices to maintain the current distribution of homes across bands, or by uprating thresholds using a regional house price index.** For the advocates of this measure, London’s housing market is so different to other local markets in the UK that it requires a specific scheme. Many experts are calling for the introduction of specific bands for Central London boroughs “to reflect its special circumstances and to reduce the instability any purely national reforms might have on London”⁸⁶.
 - 3 **Adopting the principle of an equal distribution of homes across council tax bands** (12% of homes in each of the eight bands), an option which would result “in more than half of all households paying more council tax, on average by £433 each. Subsequently, total tax take would be over £450 million higher than the current system. Most of these ‘losers’ are in inner London”⁸⁷.
 - 4 **Removing boroughs’ powers to set their own council tax rate for Band D** and to set a common rate for all London boroughs in order to fully absorb existing spatial inequality. Such a system would require a later redistribution between boroughs as “some boroughs would automatically raise more council tax than others relative to their needs”⁸⁸.
 - 5 **Creating new bands for top-end properties.**
 - 6 **Establishing a flat-rate tax for London as a whole.** By no longer applying bands, the tax would no longer be regressive, which would resolve the much-criticised spatial inequality. “A flat rate of 0.2 per cent would be fiscally neutral and result in 78.6 per cent of households paying less tax”⁸⁹.
- In conclusion, the Centre for London recommends a total abolition of the council tax, and its replacement with a tax reflecting a set proportion of the property’s value: for homes of equal value, all households would therefore pay the same rate⁹⁰.

Paris

Can densification rescue
affordable housing?



Like an increasing number of major European cities, Paris is currently experiencing strong demographic dynamism, driven by the capital's specific attractiveness in the French landscape.



Fig. 18:
residential buildings in
Paris.

The Paris housing stock

1,366,438 housing units (i.e. 2% of the national housing stock⁴)

85% primary residences⁵

6% occasional dwellings⁶

9% vacant housing units⁷

33.2% of households own their primary residence

Source: INSEE statistics for 2015⁸

The Greater Paris population rose from 6.814 million in 2008 to 6.968 million in 2013¹; while Paris proper had 2.23 million inhabitants in 2015, as against 2.18 million in 2006. **Yet while this demographic growth has been recorded in many European cities, Paris stands out from its counterparts for its density, unparalleled for a European capital:** Paris proper had 20,934 inhabitants/km² in 2015². Its reduced surface area (105 km² ³, as against 219 km² for Amsterdam, 892 km² for Berlin) and its large population give it a density reminiscent of that of major cities in developing nations: Paris is ahead of Cairo, Colombo and Montevideo in the rankings of high-density global cities. This unique characteristic for a European city is clearly the source of the difficulties that Paris is facing today in meeting its inhabitants' needs for affordable housing. Locked in

by the Paris beltway, densely built-up and increasingly expensive, Paris is faced with a conundrum: **how can it continue to house low-income households against a backdrop of historically high property prices? Can the solution still be found in Paris itself, where hardly any affordable housing is still built?**

Residential stock under great strain

Paris' residential stock is characterised by pronounced wealth inequalities between generations: older households enjoyed the national homeownership policy of the 1970s and, by purchasing their home, have generated a capital which has since been amortised. Younger generations struggle to purchase a home and suffer from the now lower income levels. The former category has everything to gain from the current increase in property prices, which increases the value of their assets, or enables them to unlock the necessary funds to purchase housing in Paris for themselves or their relatives, thereby fuelling a highly limited movement of homeownership in the capital. *"In Paris, we are no longer really in a market of first-time buyers. Home buyers are very often assisted by their parents or already have a property that they have managed to sell, but on a market in which there is little room for outsiders, or only outside of Paris, in the outermost suburbs"*, explains Emmanuel Trouillard, housing researcher at the Paris Region Urban and Environmental Agency (IAU Île-de-France).

Paris property prices, which have been soaring for several years, are often prohibitive for households hoping to purchase an affordable home in the capital: the average housing sale price rose in December 2017 to the unprecedented level of €9,040 per square metre⁹ and while

residential housing prices grew by 8% in metropolitan France between early 2010 and mid-2012, they grew by 27% in Paris over the same period¹⁰. This costliness of the Paris housing supply, together with the capital's demographic growth, **has brought about a shortage of affordable housing. The level of rents in Paris is another clear example of this.** The average monthly rent was €1,133 in 2016 in Paris (where rents increased by almost 75%¹¹ between 2000 and 2014 while salaries have only risen by 13% in France on average since 1998) and €861 in the inner suburbs, according to the *Observatoire des loyers de l'agglomération parisienne*, the watchdog for rents in the Paris conurbation¹². Since 2000, the growth rate of Paris rents has been almost three times higher than the rate of inflation¹³.

The construction of new housing units is the central issue. In Paris, new-builds are completed at a slow rate: the residential stock grows by 3,000 housing units a year, of which only two thirds are a result of new constructions¹⁴. It is very difficult to build in the capital as there is a great lack of available land. **This is in particular due to the density of Paris. Its spatial configuration does not allow for the building of anything other than dense collective housing, which has proven to be the most expensive type of housing.** Bernard Coloos, Head of

Economic, Financial and International Affairs at the *Fédération Française du Bâtiment* (French building federation), explains that:

“ Building dense collective housing is expensive due to its requirements, parking spaces, collective areas, fire protection measures, basements, lifts, corridors, etc. Individual houses cost less, without corridors; it costs around €800-900 per square metre to build a house, while it is impossible to build collective housing at such prices”.



Fig. 19:
Parisian density.

Despite this, Paris City Hall strives to use what small quantity of available land there is within Paris to develop a supply of affordable housing, as explains Ian Brossat, Deputy Mayor of Paris responsible for housing, sustainable construction and emergency accommodation:

“We use all the resources at our disposal. Firstly, regulatory resources: our local urban master plan [*Plan local d’urbanisme*] includes an obligation of a 30% share of social housing in the areas lacking social housing and a 30% share of intermediary housing outside of these areas. In terms of development, we are working actively on development areas such as the former Saint-

Vincent-de-Paul hospital or land belonging to the SNCF [the French national railway company] where new districts will be created. Between 50 and 60% of the housing in these districts will be social housing. Lastly, through investment: we have allocated a budget of €1 billion over the entire term of office to acquiring land or buildings to produce social housing”.

Despite these efforts and against a backdrop of property price inflation that cannot keep up with the demand for housing, the prospects of building new homes on unused land seem limited in Paris. Emmanuel Trouillard confirms that the volume of housing units built within Paris itself has become marginal today:

“Paris no longer has any achievements in terms of construction, in particular with the closure of the major joint development zones. There isn’t really any more available land”. It is therefore clear why an approach to build a city on top of the city would be useful, to densify by building additional storeys or to adopt building procedures which diversify the supply of affordable housing by leveraging existing buildings (conversion of office spaces into housing) or by anticipating future needs (reversibility). **As new housing can no longer be built in Paris, or only marginally, can densification be an avenue for the large-scale production of affordable housing in the capital?**

Fig. 20:
Parisian office building by the
Seine river.



Can densification help alleviate the housing shortage in Paris?

The technical feasibility of densification, which can be defined as an increase of population density within an urban area, is proven. It is currently one of the strategies selected by Paris City Hall to achieve a development of its residential stock. From converting office spaces to adding storeys, what is the real potential for producing affordable housing through densification in a city like Paris?

1 Converting tertiary buildings into housing

With some 17.5 to 18 million square metres, the French capital currently has a high volume of office space¹⁵, mainly concentrated in the “central business district, in the eastern half of the 7th arrondissement, and in other smaller clusters: Montparnasse, Gare de Lyon”¹⁶. 80% of these offices were built prior to 2000 and more than 40% before 1939. Generally speaking, these are tertiary buildings with large surface areas, as 93% of office spaces in Paris have surface areas exceeding 1,000 square metres. Conversely, the remaining office buildings are older and smaller, “sections of Haussmann buildings with mixed office and residential use”. **Yet a significant share of these offices cannot be used due to successive amendments made to the regulations governing work spaces:** some 140,000 to 240,000 square

metres of office space become obsolete each year, according to the statistics of the Paris region watchdog for corporate property (*Observatoire régional de l’immobilier d’entreprise en Île-de-France - Orié*). The total vacancy rate for office spaces in the Île-de-France region was estimated at 7.5% in 2013²¹.

Aware of this surplus unused office space and of the housing shortage it is currently experiencing, Paris has set itself the objective of converting 250,000 square metres of obsolete offices into housing by 2020²²: “there are many vacant and obsolete offices in Paris which can be converted into housing”, states Ian Brossat. **To achieve this, however, a considerable increase in the current rate of conversion is necessary:** from 2001 to 2012, slightly more than 30,000 square metres of office-to-housing conversions were authorised in Paris each year, which represents roughly 400 new housing units per year, one third of which are social housing under the French solidarity and urban renewal law (SRU), notes the *Atelier parisien d’urbanisme* (APUR)²³. Current operations are concentrated in central Paris and on the right bank of the Seine, an area with the highest density of office space. 60% of this space is made up of Haussmann buildings, “which revert to their initial purpose”.

However, more recent buildings are also sometimes converted. One such example is the Campusea Paris Montsouris student residence (13th arrondissement), the result of a conversion of offices built in the 1970s which had since become obsolete into 60 student rooms²⁴. Office-to-housing conversions of very large surface areas remain rare: between 2001 and 2012, only 65 planning permission applications were approved to convert spaces with a surface area exceeding 1,000 square metres, often upon the initiative of social housing providers or private property operators²⁵.

Who is investing in office conversions?

Individuals and small non-trading property companies (*Sociétés civiles immobilières - SCI*): 20%

Private investors and developers: 53%

Social housing providers: 27%

Figures concerning operations to convert office spaces into housing conducted in Paris between 2001 and 2012.

Source: APUR²⁶.

Office conversion: the legal framework

To encourage owners of tertiary buildings to undertake the conversion of office spaces into housing, Paris City Hall asked the government to introduce the principle of a temporary exoneration from property tax levies (*"taxe foncière"*) for new housing units²⁷. The Finance Act of 29 December 2015 provides that local authorities and public establishments for cooperation between local authorities (*EPCI*) that levy their own taxes can exonerate housing resulting from the conversion of offices from paying the share of property tax they receive for a five-year period²⁸.

The Act also provides for the option that the resulting housing can be reconverted into offices: *"a deliberation by the city council can define a prior declaration scheme to assign premises intended for purposes other than housing temporarily to the purpose of housing, for a timeframe that does not exceed fifteen years"*, as provided for in the 2015 Macron Act.

The increased number of these projects indicates that investors are displaying a growing interest for residential properties, previously neglected to the benefit of tertiary buildings. Anne-Claire Davy, researcher on housing and lifestyle issues within the demographics, housing, facilities and local management team of the IAU, explains as follows: *"There is a slight spike in interest by investors in residential properties and the diversification of their property assets. The problem with tertiary stock is that when the tenant leaves, the building is empty. The tertiary stock is poorly positioned on the market, and the implications of risk can be greater than for residential stock. [...] The latest trend to convert office space into housing is part of a specific context, there is a stock of office space which, it is hoped, will find a new profitability through housing"*.

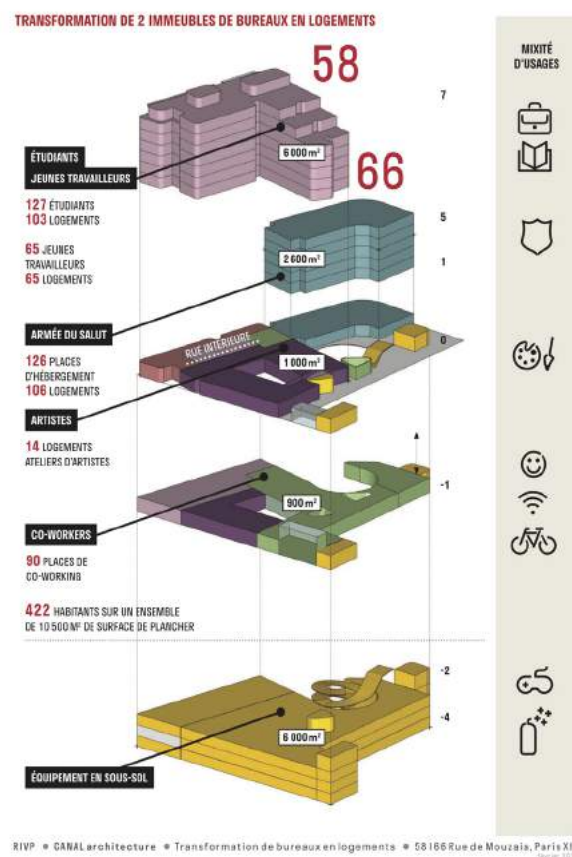
Is the housing resulting from office conversions really the type of affordable housing that is in such short supply in Paris? Anne-Claire Davy does not believe it is: *"Conversions are opportunities to create affordable housing but these are relatively expensive moves. The question of the constructability threshold is raised. Debates under the ELAN Act [Act on changes to housing, development and digital technology] discuss an authorisation to over-build in the case of office-to-housing conversions, with a view to ensuring the operation's economic balance. This does not really fit with the idea of*

affordable housing. Legal reform is required to make the operation feasible and balanced in view of Paris property prices". The average price of converting office space is €2,000 to €2,500 per square metre²⁹.

For Emmanuel Trouillard, **conversions cannot produce affordable housing within Paris itself** but *"if the building is quite far away in the inner suburbs, why not? The capacity to produce affordable housing through conversions depends on the location"*. Very often, **conversions prove to be very costly due to the nature and extent of the necessary adjustments** (decontamination, asbestos disposal, etc.) **and the complex nature of the work required to convert spaces designed for tertiary activities into habitable rooms, with radically different characteristics**. The rooms without windows which are commonplace in offices (photocopier room, etc.) are not appropriate in a home. The configuration of traffic areas is also very different in an office and in an apartment. Conversion is even more expensive in Paris, where the cost of land requires a high level of equalisation for a conversion to result in affordable housing. Martin Omhové explains these conversion operations as follows:

“ It is certain that conversions do not create affordable housing, but very expensive apartments which balance the equation economically. The few operations that Paris City Hall is showcasing to endorse the conversion of offices into housing are often supported by the *Établissement public foncier d'Île-de-France*, for the acquisition, the City Hall for long-term backing and social housing providers that take emphyteutic leases to smooth the cost of land. [...] To introduce diversity and develop the supply of affordable housing, the local authority therefore invests significant amounts of money when compared with the number of housing units created”.

Fig. 21:
conversion of two office
buildings into housing in Paris,
by Canal Architecture.



Going beyond the cost inherent to converting offices into housing and the repercussions on the prices of the resulting housing, the key question of linking these new homes to social infrastructure still remains. The new residents in such buildings will require these links. While this issue appears less relevant for the central Haussmann buildings which were originally intended for residential use, it is a major concern when converting tertiary properties into housing in business districts where there is little or no social infrastructure.

Many people remain to be convinced about the advantages of conversion: the Secretary of State attached to the Minister of Territorial Cohesion and Relations with Local Authorities, Julien Denormandie, stressed recently that “an insurer’s or property company’s balance sheet places more value on an office than on housing”³⁰; as a result, not all tertiary property owners will be interested in converting office space into housing. In terms of public stakeholders, some municipalities may even want to retain vacant office space for future use. In addition, the rents that property owners can hope to collect by leasing office space in sought-after central Paris are much higher than residential rents. “With the exception of predominantly residential municipalities for which it remains more profitable to rent out housing (Northern loop of the Seine in the Hauts-de-Seine département, Saint-Mandé, Vincennes, Fontenay-sous-Bois and Nogent-sur-Marne in the Val-de-Marne département and sections of the 4th and 18th arrondissements), rents are higher for office space in the centre of the Paris conurbation, including in sectors with a mixed fabric (offices/housing)”³¹, explains the Direction régionale et interdépartementale de l’hébergement et du

logement (DRIHL), responsible for housing and temporary accommodation in the Paris region. Other advantages from office lets may prove to be a disincentive to their conversion into housing, notes the DRIHL: “In administration terms, it is easier to lease office space than to lease housing. Tenant turnover is considered lower and the legal obligations are less restrictive. Offices’ single purpose is more common, which also lowers administration expenses”³². Another deciding factor is the property tax applicable to housing, which is much greater than the tax collected from tertiary property owners and which may dissuade operators considering an office conversion operation.

Yet the French government seems determined to make these conversions more attractive, as demonstrated by the provisions proposed for the future Act on changes to housing, development and digital technology (ELAN). One such provision is the simplification of applicable administrative procedures: while these operations previously required planning permission, the ELAN Act may make them conditional only on a preliminary declaration of work. **It could also harmonise the standards applicable to the construction**

of offices and housing (height, etc.) or create a constructability bonus (additional buildable surface area): “for each square metre of office space, these owners will be permitted to build 10% additional housing space. In a city such as Paris, this is a great incentive”³³, explains the Minister for Territorial Cohesion, Jacques Mézard.

2 Modularity and reversibility

Like in many other major European cities such as Stockholm or Munich, more than 50% of households in Paris are currently single-person. This raises the question of adapting the existing housing stock to demand. In view of this observation, **modularity can pave the way to an improved adaptation of the existing supply to meet demand, in that it can divide existing housing and thereby introduce greater diversity in housing types.** Lucille Mettetal, researcher specialised in housing issues at the IAU, explains that *“these [modular] mechanisms are part of the variable geometry subject of affordable housing and ultimately we come back to Haussmann buildings, the many doors of which allowed for such reversibility”*. **Modularity is not a recent solution.** Anne-Claire Davy reminds us that *“modularity is spontaneously there in Haussmann buildings, there is an unbelievable production of large surface areas in Paris. There was a spontaneous generation of large surface areas in districts undergoing gentrification with the families who are arriving. These are very important dynamics in terms of quality and are made possible by construction types, amalgamation and restructuring”*.

Some developers are currently marketing modifiable housing to which a new room can be added by changing partitions as families grow or the occupying household's needs change. In the 14th arrondissement, a renovated building on Rue Raymond Losserand houses eight modifiable social housing units with mobile wooden partitions, allowing their occupants to adapt the size of some rooms and the configuration of their apartment in accordance with their needs³⁴. This project was completed after six years of proceedings marked by the filing of an appeal against planning permission. **However, modularity in its contemporary form is not yet established practice:** for Lucille Mettetal, it supposes *“a very rational approach which may come up against an attachment to the patrimonial aspect of housing and homes. It is not that easy to lose a room”*. **While economical, it is only put into place in Paris in existing buildings and is not a means to produce**

additional housing; at best it provides a better fit between housing supply and users' demands, while giving users the option of avoiding residential mobility when their personal situation changes. **Modularity, like all housing construction ideas for Paris itself, hits the hurdle of land prices, which account for 25% to 50% of housing prices in the capital (according to location)**³⁵. This expense cancels out the savings offered by modularity.

Reversibility, which involves planning for the option of changing a building's purpose as of the design phase (from residential to tertiary or vice versa) with minimal adjustment costs, is of special interest in cities which are forecasting a decline in demand for office spaces together with a high and stable level of demand for housing. Michael Voigtländer, Head of the Research Unit Financial and Real Estate Markets at the German Economic Institute (IW Köln), notes that the *“idea of investing today to change future uses seems particularly attractive”*. Despite the sheen of innovation surrounding the reversibility projects currently being rolled out in some European cities, reversibility is not new and is above all to do with structural logic. Architect Patrick Rubin, whose firm Canal Architecture designed the principle of the Conjugo reversible building in partnership with VINCI Construction France, recounts the history of reversibility:

“To change a building, you should never be hindered by its structure. The major architects of the early 20th century, Eiffel, Perret, Hennebique, were already thinking about structure in this way. Many factories are therefore very cleverly designed. They are bright because manufacturers needed light. If you analyse an industrial building, it is all based on logic”.

Reversibility, scalability, modularity, hybridisation: definitions

Reversibility: *“planned capacity of a new building to change its purpose easily (office space, housing, activities, etc.) through design which minimises the extent and cost of adaptations in advance”*.

Scalability: *“a building's scope for change, anticipated as of its design phase”*.

Modularity: *“a building's capacity to change through the replacement, addition or removal of modules”*.

Hybridisation: *“the result of multiple purposes within a single building”*.

Definitions taken from “Construire réversible”, a Canal architecture publication, pp. 10-11 (Claire Henneguez, Patrick Rubin)

Lucille Mettetal confirms this opinion: “It is a subject that is believed to be new, but really all older buildings are reversible because they were designed with a platform and metal beams. There is under-estimated potential for reversibility in older buildings in particular, through the many doors that were used by servants”.

This approach and focus on structure must head the design of today’s reversible buildings, explains Patrick Rubin, for whom reversibility implies the necessary construction with beams and slabs, through which reversibility can lead to the production of affordable housing at reasonable costs:

“If there is a standard height, there is no reason why reversible housing would cost more than other types of housing. The *Habitat Colonne* procedure, characterised by a configuration with beams and slabs, has enabled us to build student residences at €1,400/square metre. All the technical features of the building are extracted and placed outside. The stairwells are naturally cleared of smoke because they are located outdoors, as are the conduits. There is nothing heroic here: it is not an architect’s architecture but a collegial architecture by everyone and for everyone”.

For Patrick Rubin, reversibility is much less costly than other housing production methods by densification, such as the renovation of existing buildings or the conversion of office space into housing. The costliness of these techniques gave rise to architects considering the development of reversible solutions. “When you arrive in an office building and you have to make housing, you have safety convergence issues, a building constructed under different standards. [...] Today, with reversibility, an office building becomes a residential building by changing 30% of its components. Today, you spend 120% to convert. Not 100%, but 120%!”.

It appears, however, that reversibility is struggling to attract investors, as it requires a cultural acclimatisation and change that is not yet complete, as Lucille Mettetal explains: “We continue to build offices in Seine-Saint-Denis which are not at all reversible. It is not yet part of architects’ and developers’ cultures”.

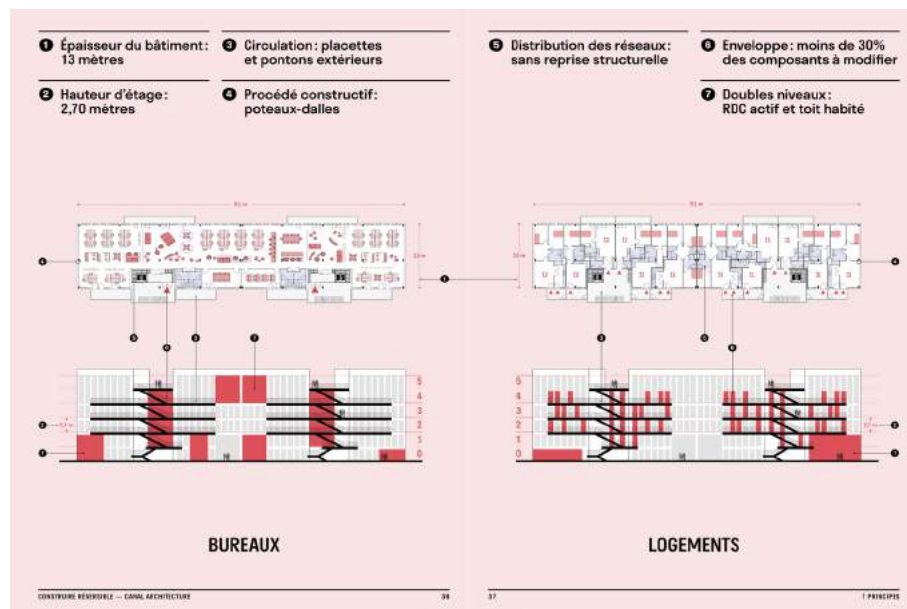
To achieve a widespread endorsement of this construction method, Patrick Rubin calls for **increased collaboration between architects, developers, lawmakers and investors:**

“Investors are key to all of this. Today, private investors say to themselves: ‘If I start my operation, if I market it on plan, it will be sold when I have 50% of acquisition options’. So when it is suggested that they convert their office space into housing in a few years, they are not interested. This reluctance is cultural. Generation Y, which will be our economic and social fabric tomorrow, is clearly very responsive to the concept of reversible spaces. It is about how the issue is considered;

for the most part it is in the anticipation of what society will become. Reversibility is not just technical, it is an intellectual shift. Places change, as do new generations!”

Another difficulty, similar to that experienced for office-to-housing conversion projects is that the designed building must be built near social infrastructure in the event that it may be converted into housing and even if it is used as a workspace at the outset. While the cost of building reversible buildings is limited, their development in Paris is also hampered by land prices.

Fig. 22: View of two possible uses, residential and tertiary, of a reversible building and the principles governing the construction of such a building – work of Canal Architecture.



3 Building a city on top of the city to develop housing stock?

Another method of densification is the addition of storeys intended for housing to existing buildings. This method is attracting growing interest in many major European cities. Michael Voigtländer explains that building an additional storey on top of all residential buildings in Berlin constructed in the 1920s or 1930s could give rise to the creation of 50,000 new housing units.

In Paris, this method has also garnered significant interest: *“Paris City Hall actively encourages densification and has clearly stated its willingness to reclaim the rooftops”,* notes Patrick Rubin. The authority believes the method of additional storeys has many advantages, which would *“help to curb urban spread and create housing without sealing off free surface areas [...] to consider new construction methods, suited to existing buildings, which use new, environmentally-friendly and energy-efficient materials”*³⁶. **As with reversibility, adding extra storeys has a long history in Paris, first occurring as far back as the 17th and 18th centuries, as demonstrated in the buildings of the Place Dauphine,** while those on the Quai de Béthune, on the Île Saint-Louis, were raised in the 19th century. As an incentive for this method, the ALUR Act of May 2014 withdrew the *“coefficient d’occupation des sols”* (floor space ratio), which set a maximum building density for each plot of land, thereby hindering vertical developments³⁷. Paris City Hall is currently planning to allow buildings in the city to be raised by 12%, by adding one to five new storeys, which would, according to the authority, give rise to 40,000 additional housing units.

Would these new housing units be affordable? For Patrick Rubin, the answer is yes. *“It is affordable housing, of course. Private owners generally have shared attic space, maid’s rooms and joint ownership of common areas. The roof is removed and modified, becoming much less sloping than before. The building condominium can sell or lease to finance the work”.* **Other experts are more reserved, believing that creating**

additional storeys is too expensive to create affordable housing: its price fluctuates between €2,000 and €4,500 per square metre, even despite an exemption from property tax³⁸.

Another concept, similar to that of adding extra storeys, focuses on an improved use of basement space, in particular when building new housing. *“Another quite significant density is found in basements: if you change your viewpoint somewhat, an upper basement floor could become a garden level, like the basement flats in London”,* explains Patrick Rubin. *“By building a car park on a lower basement level (-2), the upper level -1 is free for caretakers, co-working spaces, micro-nurseries and other community facilities. It’s what I call the semi-grounded layer, in contrast to the sky layer. With these two layers, a building already has scope for two extensions. Paris is already considering this. As it is gradually seeing fewer cars, it is anticipating what will be done with these car parks”.*

However, the avenue of upward development is running up against the obstacle of condominiums, whose consent must be obtained prior to the implementation of such a measure, possibly facilitated by the first refusal given to co-owners on the top floor to purchase new housing units created in this way. **The addition of storeys also requires planning permission,** which may prove difficult for buildings of historical importance or, for Haussmann buildings in Paris. Another condition is the absence of a quarry under the building (a concern that is important in Paris).

While densification may be a means of producing affordable housing, inexpensive land is still necessary. This is not the case in Paris, where land prices soared to levels which are totally unrelated to their actual value. **Certain questions remain with regard to whether such densification would be beneficial in a city as populated and small as Paris and the consequences**

it would have of Parisians’ quality of life, even if it does generate new affordable housing. Bernard Coloos explains as follows that:

“As to whether we have the technical capacity to develop order in reasonable structures, the answer is yes. Two questions arise from this observation: Is it socially tolerable? I think the answer is currently no. Is it affordable? These are two different things. The question is not whether or not we can still build in central Paris, on the Île de la Cité, etc. The answer is no because Paris now has one of the highest densities in the world”.

Does the future of affordable housing in Paris lie... outside Paris?

When asked whether it is still possible to produce affordable housing at a limited cost (implying land and construction cost control) within Paris itself, Bernard Coloos answers as follows:

“No, the equation is impossible. If you take conventional benefits (APL [individualised housing assistance], etc.) and equalisation, you run into €3,500 or €4,000 per square metre. In the Paris region, given the costs, there is often 50% debt today. There is no magical answer to status or financing. Someone who has zero income must pay a zero rent. If the production of a housing unit costs €400,000 in Paris, you must pay €400,000 to house a person with no income”.

If affordable housing is no longer conceivable within the capital, could it be extended to the wider metropolitan area?

“Go beyond the Paris beltway and the shift from R5 to R1 apartments with small gardens is striking. If all the bordering départements were considered to be Paris – as done in all major European cities – tens of thousands of hectares of building land would appear overnight”, highlights Bernard Coloos. Emmanuel Trouillard (IAU) confirms this analysis: *“The question is rather where to build these necessary 60,000 housing units per year [to meet housing demand in Île-de-France]. If our only reference is Paris proper, we’ll never manage that. Prices will never fall, unless there is a major banking crisis that would cut off credit; and even then, statistics show that the most recent crisis did not have this effect – it blocked the market temporarily, and the market waited patiently and then took off again”.*

While it seems impossible to absorb the shortage in Paris itself, where it appears a supply of affordable housing cannot be built, this is not the case in the wider area of the Greater Paris area (Grand Paris), which still has a high level of available land and enjoys dynamic housing construction. Here, more new homes are produced than in comparable European capitals.

Jean-Marie Gambrelle explains that today we are building *“three times more new housing units per square kilometre in the Paris metropolitan area than in Greater London”*³⁹. Henceforth, the issue of affordable housing in Paris must be considered on the scale of Greater Paris. According to David Mangin and Marc Wiel, this involves *“creating diversified employment hubs connected to the residential areas, linking old and new districts to business segments and metropolitan services, then strengthening public transportation on these segments when the level of infrastructure investment profitability is reached”*⁴⁰. All this should take place within the metropolitan area: *“as the new authority responsible for housing policy in Île-de-France, Grand Paris will play a key role in increasing fluidity and standardisation on the region’s housing markets”*, writes Pierre Madec⁴¹.

Today’s challenge is therefore to boost the construction of affordable housing on a metropolitan level while developing the region’s network in terms of efficient mobility. The capacity to produce affordable housing likely to satisfy demand from low-income households is dependent on the condition that daily commutes are reduced. For Emmanuel Trouillard, *“one of the main challenges of the Grand Paris Express [infrastructure project] is to successfully create a more inclusive agglomeration but in a broader sense, i.e. so that there is less of a break between Paris and the rest of the region and that housing is built in places which remain affordable and where there is still leverage on the market”*. According to David Mangin and Marc Weil, the challenge will be to *“pool development resources and to guarantee sufficient cohesion between*

*workplaces and homes so that facilitated mobility does not become a vehicle for compounded urban incoherence”*⁴². Alain Trannoy comes to a similar conclusion when he writes that:

“We can’t change the fact that prices and rents in this region are higher than in other regions. This reflects, for the most part, that compared to other regions many more wealthy people contribute to increasing property prices. The levers to lower prices are:

– A very strong revival of the policy to build public transportation lines. The easier it is to travel quickly from the outskirts to the centre, the more the price peak in the centre of the Paris agglomeration will decline in relation to the rest of the agglomeration. [...]

*– Remove as much as possible the Paris-suburbs divide created by the beltway and provide the same amenities and urban public facilities in the inner suburbs as in Paris itself”*⁴³.

Ultimately, it is the quality and efficacy of the mobility network that will service the metropolitan area that will determine its capacity to produce affordable housing that can satisfy demand. Without reducing commuting times, housing supply, even for affordable housing, will not attract households. Bernard Coloos is pleading in favour of such an approach: *“firstly, we must get rid of boundaries and create space. We must look for new spaces rather than managing the shortage and increasing prices. Public transportation must also be developed. I think that the Grand Paris project has come fifty years too late, but provides a response to mobility issues. Secondly, we must try to produce as much land as possible to move away from the expensive idea of increasing density. Action must focus on both land and mobility”*. An approach that incorporates housing and mobility and a strategy to build a polycentric metropolis: perhaps these are the levers by which public authorities will be able to provide inhabitants of the Paris metropolitan area with housing that is affordable and accessible to all.

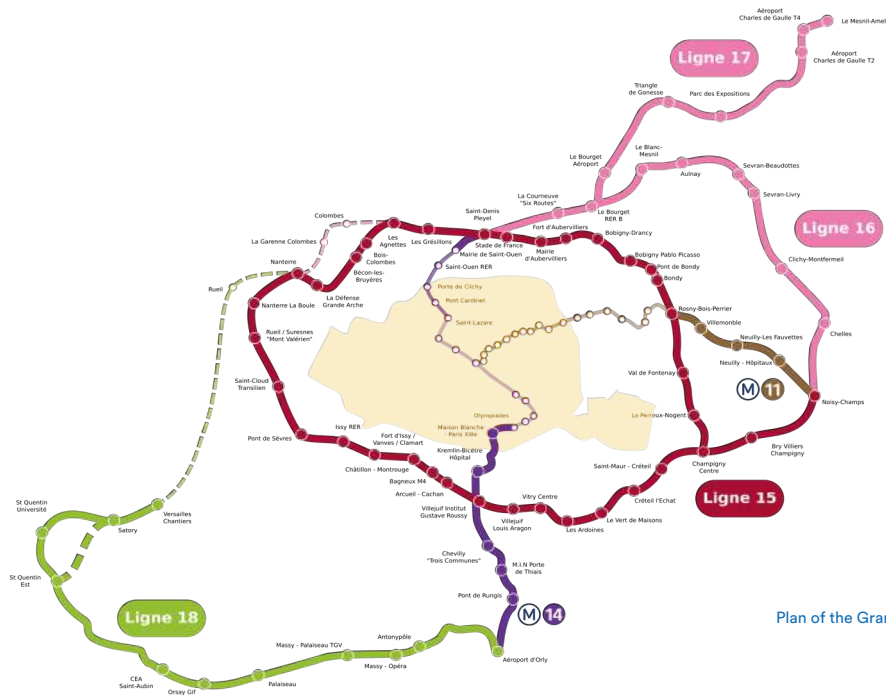


Fig. 23:
Plan of the Grand Paris Express
network

Berlin

The challenge of affordable
housing in a city of low-income
tenants



From the ravages of the Second World War to its division into occupation zones following the conflict, until the physical separation created by the Wall in 1961, the urban characteristics and architecture of Berlin have been marked by a unique history characterised during the Cold War by the juxtaposition of two fundamentally opposed systems of housing stock.

In the East, the rental market of the German Democratic Republic (GDR), the result of a significant housing construction programme from 1956 to 1970, has the specific feature of being managed by the State, which collects from each household a set rent equivalent to 3% of its income, regardless of the size and quality of the housing. *"This State-run housing market favoured young people with young children"*, explains urban planner Mary Dellenbaugh-Losse. *"In the 1970s and 1980s, slab housing was constructed with the highest standards of the time. These new apartments were preferentially allocated to young people with young families who were conformed to the socialists' ideology, and it disadvantaged political outsiders, single people, and older people, so you had a high concentration of those demographic groups in the inner-city"*. At the time of German reunification in 1989, Berlin had to contend with dilapidated residential stock in its eastern side: *"You had a lot of really run-down tenement buildings from the industrial era, which hadn't been renovated since the Second World War, or in some cases, since they had been built. People would do DIY repairs*

because you could live in an apartment very inexpensively and you would typically have a sort of coal oven, they didn't have interior bathrooms, many of them didn't have interior toilets". Conversely, the west side had been a *"western island in the GDR"*.

At the end of the Cold War, a major housing construction policy was conducted: tax incentives were granted to whoever would build new housing in the former East Germany, while undertaking not to live there for five years¹. *"There was a lot of housing constructed that wasn't needed or necessary at this time"*, explains Mary Dellenbaugh-Losse. **This increase in construction came with an unexpected demographic decline.** There was a strong population decline in Berlin between 1993 and 1996, a shift towards the neighbouring State of Brandenburg, as well as the beginning of urban sprawl: *"Of course neither West Berlin nor East Berlin had ever experienced suburbanization. Because West Berlin didn't have a hinterland and East Berliners couldn't choose how to live",*

reminds Mary Dellenbaugh-Losse. **The conjunction of an increased housing supply and a drop in population produced surplus housing stock**, which most likely contributed to housing becoming a minor concern for the State of Berlin.



Fig. 24:
The material destruction of the Second World War: view of a street near Unter den Linden, Berlin.

However, the expected rise of the new capital of reunified Germany was slow to emerge: *“Since the Second World War, Berlin could be described as a broken, poor city, compared to other Western European capitals. In the 1990s, the city thought it would grow and expand because of the capital coming in, but it didn’t happen. It really only started to happen after 2006 or 2007”,* notes Michael LaFond, founder of the id22 project and a cohousing expert. Today, some 40,000 people are moving to and settling in Berlin each year, *“that’s like a whole city that came additionally to the population that lived here before”,* notes Dirk Böttcher, Director of the housing policy unit within the urban development and housing department of the Berlin Senate. **These figures do not include the major migratory flows caused, from 2015, by the influx of a very large number of asylum seekers** from Syria, Iraq, Afghanistan or Eritrea². The Berlin Senate has forecasted a population increase of 266,000 inhabitants by 2030, 190,000 of which will have arrived between 2015 and 2020. Over 2016 alone, the city’s working population grew by 2.6%³, i.e. 48,800 inhabitants. According to Michael LaFond, the return to demographic growth is part of a broader movement: *“It’s a renaissance of the city, so cities everywhere are rediscovered and people want to live in them, they don’t want to go to the suburbs”*.

Berlin – key figures

Population: 3,574,830 inhabitants (2018)⁴

Number of households: 1,998,300⁵

Percentage of single-person households: 51.7%⁶

Percentage of inhabitants of foreign background: 27%⁷

Average yearly income: €30,775⁸

Unemployment rate: 12%⁹

Structure of Berlin’s housing stock¹⁰

1,902,675 housing units (2015)

Berlin’s housing stock in 2016¹¹

15% dwellings inhabited by owner-occupiers

60% private rental housing

10% cooperatively owned dwellings

15% public rental housing

6 municipal companies own approximately 300,000 apartments.

Vacancy rate: 2-3%¹²

Average surface area per inhabitant: 38 m²

Fig. 25 :
Housing blocks in East
Berlin, 1987.



Despite this significant demographic growth, the rate and volume of housing construction remain relatively low:

"Between 2011 and 2016, 200,000 people moved to Berlin, 80,000 building permits or permissions were granted and only 40,000 new housing units were constructed. We're running after the population growth", explains Dirk Böttcher. In relation to population, Berlin, together with Cologne, was the backmarker in construction of new apartment blocks in 2016¹³. Furthermore, it is the investor approach which is prevailing today, meaning that the housing units being built at the moment are luxury homes intended for sale and not rentals, despite the fact that more than 80% of Berliners are tenants. The many luxury apartments that are being completed in Berlin are not suited to its the requirements of its population, which is still characterised by low incomes on average. Berlin has the lowest average household purchasing power and the highest unemployment rate of Germany's seven major cities¹⁴, a characteristic which is mainly due to its labour market: *"Berlin doesn't have a lot to offer, job-wise. We're the seat of government, which is great for all the people who commute here from Bonn, and there are some banks here. But really all we have is what they call a 'Hauptstadtpräsidentant'. It's not the official headquarters, it's just their local capital city headquarter. It's always much smaller", explains Mary Dellenbaugh-Losse. None of the 30 companies in the DAX index has its headquarters in Berlin, while only three of the 50 MDAX companies are based*

there: Deutsche Wohnen, Axel Springer and Zalando¹⁵. Once again, this situation is a legacy of Berlin's specific history: "Cities normally grow up around industry and finance and services, but because Berlin was divided basically all of the big companies left and went to West Germany, to Stuttgart, to Frankfurt, to Munich and nobody ever moved back to Berlin after reunification", notes Mary Dellenbaugh-Losse. These factors explain Berlin's relatively low GDP per capita (€36,800)¹⁶ in comparison to that of other major German cities such as Hamburg (€62,800)¹⁷. "We have a lot being built in the luxury segment, but of course those aren't going to solve the affordability problem", notes Mary Dellenbaugh-Losse. Upmarket new developments dominate the historic centre. In some cases, prices in excess of €20,000 per square metre are being quoted¹⁸.

At the same time, Berlin is also experiencing a significant increase in rents, which rose by 32% between 2010 and 2015 and which may exceed €10 per square metre from this year¹⁹, and housing sale prices rose by 68% between 2010 and 2015²⁰. These soaring property prices have resulted in a greater ratio

of income for households: *"Before reunification, 18% of natural income went to the so-called brutal cold rent without heating²¹. Now we are at 29%. That means that a lot of people give more than half of their income for rent with heating", explains sociologist and urbanist Sigmar Gude, founding member of Topos in Berlin.*

The upsurge in Berlin's housing prices can be explained in particular by "the considerable increase of housing construction costs over time with the enactment, inter alia, of energy efficiency and fire protection standards", reminds Michael Voigtländer, Head of the Financial and Real Estate Markets Department of the German Economic Institute (IWI) in Cologne. **The low incomes of the average Berlin household are coping poorly with this price increase and the gap between housing supply and demand is growing, resulting in a shortage of affordable housing.** The rental housing stock is constantly falling: supply was down 6.4% in the first three quarters of 2017 compared to the same period in 2016. This decline can also be explained by tenants' limited residential mobility; in a period of shortage and when moving from one apartment to another often involves an increase in rent, there is a strong incentive to stay put. **In total, the Berlin Senate estimates that it would require 194,000 housing units to meet demand for affordable housing by 2030.** In light of this, the Senate set itself the objective of building 20,000 housing units per year until 2021, then 10,500 units per year from 2022 to 2030. To achieve this, it is rolling out a partner-based approach involving public and private stakeholders, as Anna Granath Hansson explains:

"The Alliance for Housing Construction in Berlin, established in 2014, is a cooperative agreement between the city, the interest organisation of public utility landlords, and an interest organisation of private landlords [...]. The aim of the initiative is to 'restore the equilibrium of supply and demand on

*the housing market', making rents affordable to more members of society"*²².

Under the agreement, public utility landlords (predominantly municipal housing companies) will undertake to build 3,000 new dwellings per year, of which 10 to 33% should have non-serviced rents below €7.5 per square metre and per month, while private landlords undertake to produce some 6,000 new dwellings per year, of which 10 to 20% are subject to the same obligations²³.

Yet the implementation of a housing construction policy requires first and foremost the availability of developable unused land. Once this first condition has been met, developers must still need to access existing land. **As in many attractive European cities facing an affordable housing shortage, Berlin must therefore tackle the thorny issue of using its available land if it is to reach its annual construction objectives.**

Berlin facing the challenge of accessing land

Unlike many major European cities, Berlin is not yet suffering from insufficient available land. "From the perspective of someone in Munich, this is a paradise. You look around, you find so many empty spots where you can build", explains Daniel Hofmann, Managing Director of the GEWOS Institute for urban, regional and residential research. The German capital spans a much greater area than some of its Western European counterparts: its total surface area is 892 km², as against 105 km² for Paris²⁴, 219 km² for Amsterdam and 414 km² for Vienna. "We know that there are sufficient plots in the city to build 137,000 housing units until 2030 when the planning conditions and the usability are created", explains **the Berlin Senate, which recently identified 25 major sites in the city which could be used for 50,000 housing units.** In addition, medium-sized sites with potential for 70,000 dwellings and small sites which could give rise to 30,000 additional housing units by 2025²⁵ have also been identified.

This does not mean that all this land is publicly owned: "only about 15% of the buildable plots are owned by the Land Berlin", explains the Senate²⁶, which always offers its own buildable land to the six municipal housing companies in Berlin as a priority. Land which is not retained by the municipal housing companies is then offered for sale to cooperatives²⁷, failing which, private developers can also obtain land through competitive bidding procedures. Plots are allocated on the basis of the price offer (30%) and offers' compliance with predetermined criteria (70%), set in consultation with the districts ("Bezirke").

Fig. 26: Berlin and its districts ('*Bezirke*').



It is as part of these competitive bidding procedures that the Land rolls out its model of cooperative building land development, a land management instrument through which the Land's conditions for the sale of plots of land to private stakeholders are that they build affordable housing (30% of new housing units must be subsidised) and that they contribute to funding social infrastructure. "In exchange for the property value that is generated from the building process, the developer has to bear or cover the costs for the infrastructure. There's a certain way to calculate what they have to pay for the social infrastructure, like for example kindergartens or schools", explains Kristof Laser. **Yet this framework can sometimes prove to be counterproductive**, as Michael Voigtländer explains: "This causes developers to opt to recoup these investments by building housing for high-income, rather than average- or low-income households". Christoph Gröner, founder of property group CG Gruppe, confirms the sometimes-damaging effect of criteria set for the production of affordable housing: "The model of cooperative building land development acts as a deterrent. No assistance is given, instead I have to finance rentals at €6.50 per square metre by building apartments just next door which will be rented out at €16 [per square metre]. Even if I thought that there would be more demand or opportunities by renting at €10 or €12 [per square metre], I can no longer afford to. It is precisely the 'median' segment of low rents that should be boosted, not apartments that are highly subsidised". These reservations bear witness to the difficult balance between a policy which incites private developers to

produce affordable housing and a restriction of the equalisation which these developers must conduct.

This is not the only obstacle standing in Berlin's way to utilise its own available land to build housing.

The collaboration between the Land and the different districts across the area is not without its difficulties: "Another issue, specific to Berlin, is that it is not planning centrally; most housing developments must instead be assigned by the 'Bezirksregierung', the district administrations, which greatly complicates the matter", explains Michael Voigtländer. One of the greatest challenges for relations between the Land and its districts may be to convince the districts to share information on their available land more effectively with the Land. The Senate already listed this difficulty when identifying land to build temporary housing for asylum seekers

in 2015²⁸. To solve this, the State of Berlin recently launched a land registry, the "Housing Construction Site Information System" (*WoFIS*), the result of cooperation with districts. The *WoFIS* provides an overview of buildable land which could have room for 50 dwellings or more and places them in categories according to their potential²⁹.



Fig. 27:
View of Berlin's
Tempelhofer Feld in 2012.

Another hindrance to the use of available land in its area: in the implementation of its land strategy, the Land is coming up against a growing number of “not in my backyard” (“NIMBY”) reactions from inhabitants, who are used to the capital's low density and have no desire to see it rise through the building of new housing units. *“People are used to that void. They have their allotments and their gardens. Berlin is not like a proper city, it's like an area, like the heart of the rural area, so from one end to the other, it's more than 20 miles. You have so many empty spaces and voids you could build on. But people are used to that so they are used to walking with their dogs on that field, they're used to going skating on Tempelhof airfield, and so that's a difficult political question”,* explains Daniel Hofmann. Michael Voigtländer confirms this assessment: *“Berlin has large parcels available, such as the Tempelhofer Feld, a former airfield in the heart of the city. Yet strong NIMBY-ism has caused plans to build housing on the Feld to be dropped”.*

Housing policy: how is jurisdiction shared between the Federal State, the *Länder* and municipalities?³⁰

The legislative provisions applicable to rental housing are issued by the Federal State. The *Länder* are responsible for anti-Airbnb regulations, social housing subsidies and rent regulation instruments which supplement national instruments. Municipalities (or, in Berlin, the *Bezirke*) have authority over urban land development, the provision of buildable plots, welfare payments and allowances and municipal housing companies³¹.

In Berlin, the Land is in charge of the development policy for the entire city, of development procedures for major projects and appeals regarding rejected planning permission applications when they concern sites with a surface area greater than 1,500 square metres.

“Until 2006 the social housing subsidies were the task for Federal States and the Bundesländer so both were financing it. Then

in 2006 there was a legislative reform and only the Bundesländer got the responsibility for social housing. But the Federal States gives money to the Länder until 2019, for social housing. Today there are negotiations about the future, post-2020. It appears that the Federal State aims to give the Bundesländer €1 billion in 2020 and in 2021 for social housing investments. We'll see if there are future mixed responsibilities of Federal State and then the Länder - now the Länder are responsible with the financial help from the Federal State”, explains Dirk Böttcher, Director of the housing policy unit within the urban development and housing department of the Berlin Senate.

Fig. 28:
residential buildings in
Kreuzberg, Berlin.



The latest challenge is a new phenomenon of land speculation, which drives up the price of available land. Land now accounts for 20 to 50% of property prices depending on their location, explains Kristof Laser, from the urban development and housing department of the Berlin Senate. *"There are signs that developers get the building permit and then do nothing and sell it off with the building permit 3 or 4 years later. This is profitable for them because there's a 30% increase in the price every year without doing anything"*. One means of combatting this land speculation could involve obliging developers to launch their operations within two years of obtaining their building permits. Another lever could be the implementation of a fiscal instrument against land speculation yet any provision of this kind must be rolled out on a federal level. It would also be difficult to implement: *"How high can a tax be to be worse than a 20% rise in the value of the land?"*, wonders Kristof Laser. Christoph Gröner recommends *"tying the planning consent on the land to the person that applied"* to prevent it from being sold on³².

Berlin will have to work hard to overcome these many obstacles to using its land if it intends to meet the growing demand for affordable housing it is experiencing today. However, the building of new housing on this available and usable land, by no means a panacea, will not suffice to resolve the shortage. The fight for affordable housing in a city in which 80% of inhabitants are tenants presupposes above all that the rising rents in the existing housing stock must be contained.

Preserving affordable rental housing stock, Berlin's primary challenge

To house a population with incomes that are generally relatively low, Berlin, in which 80% of inhabitants are tenants, must strive to maintain and develop a rental housing stock that is affordable to most households, as Reiner Wild, of the Berlin Tenants' Association, explains: *"Increases in the supply in the top segment have no great effect on the overall market. We can't rely just on new properties let at market conditions; we need larger numbers of new properties on offer at reasonable rents"*³³.

To achieve this, Berlin can rely on several types of affordable rental housing, starting with private rental housing that is subsidised on a temporary basis, which is what can be defined as Germany's social housing. The German social housing system is far removed from its French equivalent, where social housing is publicly owned. This is not the case for German social housing, which involves a private owner renting a property to a municipality in exchange for a public subsidy (for example a low-interest loan). Researcher Lucie Lechevalier-Hurard explains that:

"State subsidies for construction can now be granted not only to public-utility bodies but also to strictly private lessors. [The German housing policy] makes no distinction between the various housing stakeholders when it grants public construction subsidies. The granting of subsidies is not linked to any specific social qualification on the lessor's part. Private contracting authorities and property development companies and non-

*profit public-utility housing companies are entitled to these subsidies in equal measure. One of the main ideas behind the public housing policy in Germany is above all to let the market provide the housing [...]. 'Social housing' is not limited housing stock but a housing characteristic of limited duration. A property is qualified as 'social' if, for its construction, the lessor obtained a public loan: during the years in which this loan is paid back, the tenants of the apartment are selected (upon recommendation of the municipality) according to social criteria, in particular on the basis of their income. Yet once the subsidy is fully paid off, the property becomes part of the private sector"*³⁴.

It is therefore possible for a private body (a company, a person, a municipal housing company or a cooperative) to provide social housing. In Germany, it is even the most common configuration. *"Referring to ownership structures does not make sense in the German case, since around three fifths of the social rental housing stock have private owners"*³⁵, writes researcher Stefan Kofner. This mechanism means that there is no structural difference (in type or quality, etc.) between a 'social' housing property and an unsubsidised private property.

Fig 29:
Berlin Mayor Michael Müller,
gives a speech on rent control
mechanisms at the German
Bundesrat in 2015.



The fixed-term agreements on which the German social housing system is based are negotiated between the private owner of the property and the municipality in which the property is located. It is the municipality, and not the other contracting party, which selects the household who will live in the property in question. The municipality then conducts two types of checks regarding the occupation of the subsidised property: firstly concerning the income of the selected household (only a low-income household is entitled to subsidised housing) and secondly concerning the rent amount, subject to a set ceiling (€6.50/square metre per month), increases to which are limited to €0.20/square metre every two years.

During the agreement period (payback period of the subsidy granted, generally lasting between 20 and 40 years), the rent gradually rises to market levels in 20% increments each year. When the gradual rent increase resulting from the expiry of the agreement concerning a property proves incompatible with the income of the household living there, the household is offered another subsidised property. *"Of course, the biggest building programs are those of the post-wall reconstruction period and then you have the 1960s and 1970s and all these typical periods of public subsidized housing. Those were rent controlled for 30 or 50 years. Now you see the rent controls are running out. These are the apartments that were subsidized in the 1970s and 1980s"*, explains Dirk Böttcher. **As from the end of the 1990s, social housing subsidies were suspended due to a lack of financial**

resources and were only restored in 2014, when the State of Berlin observed the emergence of tension on the housing market and set itself the objective of rebuilding a major stock of social housing.

"We started social housing subsidies again in 2014 for new-build houses. We have subsidies for 2,500 apartments this year, but we are planning to increase it to 5,000 apartments in 2021", explains Dirk Böttcher. The subsidies paid by the State of Berlin are interest-free loans of amounts ranging from €70,000 to €91,000 per apartment. *"This is our strategy to answer the decline of the old social apartments, through which we are attempting to stabilise the social housing segment"*, notes Dirk Böttcher. Urgent action is required as the Senate estimates that most of the ongoing subsidy periods will have expired in ten years³⁶. On a national scale, it is estimated that 100,000 housing units lose their social status each year³⁷.

Social housing in Berlin: key figures

Ownership structure of social housing in Berlin in 2016³⁸:

79,089 dwellings belonging to private owners (i.e. 68%)

30,364 dwellings belonging to municipal housing companies (i.e. 26%)

6,772 dwellings belonging to cooperatives (6%)

Rise of social housing rents³⁹:

2007: €7.40/square metre

2010: €8.18/square metre

2013: €8.71/square metre

2016: €9.43/square metre

Stefan Kofner notes that *“for a long time, the number of dwellings losing their social status each year has been far greater than the number of social dwellings newly approved”*⁴⁰. Furthermore, the new subsidy agreements include both the modernisation of existing apartments and the construction of new properties. Developing the social housing stock does not therefore mean any overall growth of Berlin’s residential stock. This holds true on a national scale as well: in 2015, of the 51,000 approved social dwellings, not even a third were newly-built rental apartments⁴¹. *“The basic problem is, with only 100,000 social housing units left in Berlin and tenant fluctuation of maybe five percent each year, there is only a minimal supply”*, explains Reiner Wild, Managing Director of the Berlin Tenants’ Association. *“This urgently needs to be expanded. Even many people with incomes too high to qualify for social housing can no longer find anything affordable”*⁴². This trend is even more worrying as there are many households eligible for social housing in Berlin, although the number is falling: *“the share has dropped to 44% now, and was 51% the year before,”* explains Kristof Laser.

Yet social housing is only one possible source of affordable housing, with municipal housing companies as another important source. While these companies can themselves own social housing as parties to the aforementioned subsidy agreements, most of their stock is not social housing. Out of the 300,000 dwellings in Berlin’s municipal stock, only roughly 30,364 were social dwellings in 2016⁴³. The six municipal housing companies in Berlin currently own up to 9.8%

of the Berlin rental sector⁴⁴. Independent companies with dwellings that house tens of thousands of tenants⁴⁵, they are currently working on developing their stock, to reach a target of 400,000 housing units in 2026, through a policy to acquire existing housing and also by building new homes. **Berlin’s municipal housing companies have set a combined goal of building 6,000 housing units per year.**

Despite their status as a for-profit undertaking, these companies receive direct instructions from the Berlin Senate, which sometimes leads them to make decisions which run against their own interests. *“They should act as normal companies to make a profit, but they also get orders from the Senate, which sometimes obliges them to do things they would not otherwise do. Some have been ordered not to raise rents above a certain ceiling and to only give flats to people who are in need,”* explains Daniel Hofmann. Reiner Wild, Director of the Berlin Tenants’ Association, confirms this: according to him, municipal housing companies *“are subject to enormous political pressure. They are told to build 6,000 apartments a year, while on the other hand they are repeatedly being thwarted”*. Christoph Gröner believes that they *“are constantly being given contradictory political demands: They must keep existing rents low and promote climate protection, they must develop new buildings while protecting neighbours and allotment gardens, they must offer new apartments to let at eight euros per square metre – but they have to be [...] energy efficient. Local policies certainly don’t make it easy for private companies. But they make it even more difficult for their own housing industry”*⁴⁸.

Municipal housing companies must work with these obstacles and with ever-increasing housing construction prices (which influence in particular the regulatory restrictions applicable to them) to continue to develop affordable housing stock: *“It is very important for the State of Berlin to have its own housing stock to protect this market segment and to protect low-income households”*, notes Reiner Wild.

Municipal housing in Berlin: key figures

Six municipal housing companies: DEGEWO, GESOBAU, GEWOBAG, HOWOGE, Stadt und Land, WBM

Total profits recorded by Berlin’s municipal housing companies in 2016: €390 million, fully reinvested⁴⁶

Size of the stock owned by municipal companies: 295,000 housing units⁴⁷

Fig. 30:
construction of a
cooperative housing site
in Spreefeld, Berlin
(see p.57).



The last significant player in Berlin's affordable rental sector is the cooperative housing sector, which, with some 186,000 apartments, accounts for more than 11% of the German capital's rental stock. In Berlin, this type of housing stems from a long history: many cooperatives were founded at the end of the 19th century or during the housing reform between the two World Wars. *"Many cooperatives have been here since the 1870s"*, explains Michael LaFond, who is involved in the Spreefeld cooperative housing project (see p.57) and is the author of a publication on co-housing in Europe. *"Historically, they had emphasis on affordable housing. Younger cooperatives, created in the 1980s or 1990s, also have an interest in affordable housing but equally in community and democracy within housing"*. **Cooperative housing is based on a joint ownership model and on a principle of shared and democratic management of common spaces.** *"The kinds of housing that we encourage tend to be smaller-scale, but in any case, participatory. People are involved more directly in the planning"*, explains Michael LaFond. In Berlin, cooperative housing is mainly seen in complexes of apartment blocks with 5 to 10 floors and large common spaces (in particular on the ground floor, and shared gardens. Very often, they include non-residential spaces such as nurseries or workshops⁴⁹.

In Berlin, cooperative housing is a type of affordable housing at a lower cost than that of regular housing. Some architectural decisions made by cooperatives enable them to reduce construction costs (plywood flooring on the outdoor decks, wire mesh along the internal stairs instead of banisters, etc.)⁵⁰.

Many cooperatives use the "living rent" – a non-profit rent, simply intended to cover the cost of the building and to build up a reserve for repairs. Urbanist Mary Dellenbaugh-Losse gives the example of a cooperative at Prenzlauer Berg which purchased land to build a *"very ecological,*

very efficient low-cost construction" where the coordinators managed to limit the rent to €300 per family.

Cooperatives, however, are coming up against a growing set of difficulties. It has become more complicated to found a cooperative in Berlin, due to a significant rise in land prices and to the lack of a workforce in the building sector in view of the current building boom in the German capital. At the same time, **cooperative housing is only a small and partial response to the affordable housing crisis, because it requires a considerable contribution from each household to acquire the land and finance the construction of the future housing blocks.**

Whether we are talking about the challenge of social housing subsidy periods coming to term, the rising construction prices or the limitations they place on the production of housing by municipal companies or the considerable initial investment required for

cooperative housing projects, it is clearly difficult to produce affordable rental housing in Berlin today. **This is why it is important to protect, now more than ever, tenants who often have low incomes from an increase in property prices which would possibly mean that they must leave Berlin and would make the city inaccessible to a growing number of such households, whose presence is necessary to maintain the German capital's economic vitality.**

Cooperative housing in Spreefeld⁵¹

Along the Spree, on former industrial wasteland which became part of the no man's land during the Cold War, near East Berlin's militarised border, is now one of the most complete examples of a recent cooperative housing construction operation. A cooperative housing collective purchased this site from the federal government to build here, between 2007 and 2014, with no subsidies, three buildings with eight floors which currently house dwellings, retail space and co-working areas, surrounded by shared gardens.

This private initiative was created in response to the increasing number of luxury housing development projects. Mixed uses, public access and passive architecture are the project's priorities: the ground floors are reserved for common or retail spaces, a nursery, co-working areas, while the apartments are on the upper floors.

The apartments were designed to be accessible for the elderly and for disabled persons and they have a variety of configurations to meet the diversity in users' needs. *"The rooms were designed to adapt to changing uses: in 2015, two of the common rooms were adapted to become dwellings for refugees,"* explains the collective.

Project development period: 2007–2014.

Site surface area: 4,000 square metres.

Price of the apartments: €1,050/square metre.

Monthly rent for retail spaces: €15/square metre (including heating).

Residents: 140 people, of which 95 adults, mostly aged between 40 and 60.

Apartments: 5,600 square metres, i.e. 64 apartments.

Common spaces: 1,100 square metres of common spaces.

Retail spaces: 1,000 square metres, of which 100 co-working work stations.



Fig. 31: A shared kitchen in the Spreefeld cooperative

How can tenants be protected more effectively?

Berlin is undeniably a city of tenants, who make up 80% of the German capital's inhabitants. The figures show a national preference for rented housing, which can be explained by how difficult it is to access credit, the generally affordable nature of German rents and the quality of German rental housing. *"The private rental housing sector in which most people actually live is very good at providing living space for people of medium income, a problematic segment in most countries, where you have an owner-occupied property sector that's soaring and states pouring subsidies on it and the prices are rising even more, while the rent control sector is always too small. I believe that a lot of pressure is being taken off the market by this medium segment of private rental housing",* explains Kristof Laser.

The German legal system provides a favourable framework for these tenants with great security. Tenancies, always identical, are open-ended. Rents are set following a negotiation between the owner and the tenant, often on the basis of rents published in the *"Mietspiegel"*, an online register of rental prices per municipality published every two years since 1973. *"Tenants can go to court if they believe that the rent they have accepted is usurious [...], i.e. 20% greater than the rents practiced for equivalent properties",* reminds Bernard Vorms⁵². **This set rent can only be changed in rare cases.** It can be increased if the owner of the property in question modernises the property. Owners can also increase rents when they change tenants. The significant turnover in the rental sector, with students who stay only for short periods in an apartment or persons who fail to find employment, means that rent increases are currently very frequent. *"Every time the landlord turns over the apartment, he raises the rent. The rent for the whole area goes up, which affects the 'Mietspiegel', which is simply a measure of the actual rent in the area",* explains Mary Dellenbaugh-Losse. *"The good thing is that most households in Berlin will have an existing tenancy contract, and therefore quite affordable rents. The problem is new contracts",* confirms Kristof Laser.



Fig. 32:
housing in Berlin.

Since 2015, rent increases have been restricted to 20% through a rent control system. *“The State did not devise any instrument for checking that the rent control system is respected or penalizing anyone who doesn’t abide by it. Actually, the burden of proof is on the new renter to prove that their rental contract does not conform to that, and then to sue their new landlord which from a sociological perspective, is fairly unlikely. The rent control mechanism in its current form is ineffective”,* criticises Mary Dellenbaugh-Losse. **This lack of checks for compliance with the law encourages owners to ignore the 20% limit.** Reiner Wild, Managing Director of the Berlin Tenants’ Association,

confirms this: *“the ‘Mietpreisbremse’ is having virtually no effect. Only a few landlords, the municipal companies and cooperatives are complying with it”⁵³.* **Owners are also conducting superfluous modernisations with the sole aim of asking a higher rent.** In view of this, many experts are calling for improved legal protection for tenants. *“We need to protect renters and their rights. This is done above all on a federal level, but some aspects are on a State level”,* explains Michael LaFond. Many experts are calling for the Berlin State Senate to put an end to the abusive rent increases on grounds of modernisation. Michael LaFond believes that *“means not*

allowing things like elevators or new balconies, or things that are not necessary that add value to the apartment”. Such measures could provide more protection for tenants while curbing the rise in rents, thereby guaranteeing that the affordable housing stock is preserved for households with low and medium incomes.

Berlin, “poor but sexy”... and unaffordable?

Long considered one of the most affordable capitals in Europe, Berlin is currently experiencing a sharp rise in rents, a trend which has significant repercussions in a city with an overwhelming majority of tenants. For Michael LaFond, **the new-build housing policy alone will not stem the current price inflation:** *“Yes, the city should be building more, and they are building more, but the fundamental problem is housing policy, rental policy, real estate policy. Structural questions that are difficult, and which are a question of political will”.* **The current housing crisis in the German capital will only be resolved by implementing an array of complementary measures.** Dirk Böttcher, Director of the housing policy unit within the urban development and housing department of the Berlin Senate, explains: *“You need multiple strategies, on the tenancy legislation, new-build apartments, municipal housing companies and other owners of cooperatives, while continuing to subsidise social housing. It’s a mix of measures and only one or two actions are not enough to fix or face this problem”.* This may be the way in which Berlin can hope to build up a stock of affordable housing to meet the demand of the low-income households which make up the majority of its population.

Warsaw

Developing the rental housing
stock to move forward





Fig. 33:
The rubble of Warsaw, 1945.

Destruction, nationalisation, restitution: residential stock with a unique history

Warsaw's history is marked by the uprising brought about in 1944 by the Polish resistance against the German occupation and which subjected the Polish capital to tremendous retaliation: *"The city must completely disappear from the surface of the earth. [...] Every building must be razed to its foundation"*¹. Heinrich Himmler was quoted as saying. This was done: at the end of the War, **80% of Warsaw had disappeared. 10,000 buildings, 90% of the city's dwellings, were destroyed**². Infrastructure was not spared either: *"Its streets, public transport, water supply, wiring, city gas and sewage systems"*³ were severely damaged or even destroyed. While Warsaw's population was 1.3 million inhabitants in 1938, only 380,000 inhabitants remained at the end of the War⁴, during which 700,000 people were killed in the city.

These events had long-lasting consequences for Warsaw's residential stock. Housing that had not been destroyed was often abandoned and the owners of land on which many buildings once stood were sometimes unlocatable. *"When so many of the city's residents left to escape the violence, were forcibly removed or exterminated in concentration camps, who remains to claim ownership of land to rebuild it?"*⁵, writes researcher Julie Lawton. Yet *"without each private owner's consent, neither Warsaw nor the Soviet Union could redevelop the destroyed city"*, she notes⁶. This state of affairs resulted in the signature of the Warsaw Decree in October 1945 by the Soviet Union (also known as the Bierut Decree), which provided that *"the ownership of all real estate in Warsaw, including privately-owned property, is transferred to the municipality of Warsaw"*⁷.

While the authors of the Decree claimed they wished to facilitate the reconstruction of the city⁸ by creating an opportunity for former owners and their legal successors to submit a claim for ownership of the property, owners only had six months following the date on which ownership was transferred to the municipality of Warsaw, an illusory timeframe given the number of people displaced by the War and a provision which served the stated goal. In any case, **98% of the formal applications submitted through the provisions of the Warsaw Decree were denied**⁹.

This decision in the immediate post-war period and the decades of Soviet control over Poland prior to the fall of the USSR left a lasting mark on Warsaw's morphology, more specifically influencing the city's housing stock considerably and for the long term. Following the War, *"the communist political atmosphere [...] did not only affect the city's economic and social structure but also its physical restructuring"*¹⁰, writes Tuna Tasan, Professor at the University of Amsterdam. While the productive forces and the national economy were intentionally focused almost exclusively on industry (and in particular heavy industry), transport and agriculture, **the priority and importance placed on industrialisation prevented any significant investment in housing**¹¹. Tuna Tasan also writes that *"investments in housing were initially confined to measures aimed at using more or less demolished existing buildings as much as possible to satisfy the requirement of a minimum standard"*¹².

Warsaw - key figures

Population: 1.75 million inhabitants

Surface area: 517.24 square kilometres

Density: 3,391 inhab./square kilometre¹³

811,700 households¹⁴

2.1 persons per household¹⁵

49% single-person households¹⁶ and 18% two-person households

Land continues to be nationalised, yet this nationalisation is mainly focused on the city centre. Land located in what is currently Warsaw's suburbs is often still privately owned¹⁷. *"After the nationalisation of housing belonging to people who were killed, had disappeared or were forced to escape during the war, and of all housing units exceeding a certain size, only a small number of privately-owned apartments remained in the centre of Warsaw"*, notes Tuna Tasan¹⁸. **Housing had a number of features common to dwellings in societies subject to Soviet rule: small size, limited number of rooms, uniform architecture** with the *"mass construction of homogenous tower blocks"*¹⁹.

As of the fall of the Soviet Union, a period of economic and social transition began which would transform housing in Warsaw. While the local authorities were giving growing importance to the definition of urban policies in Poland, Warsaw's architecture and landscape were undergoing a transformation. The private residential stock grew quickly²⁰, in particular through the **implementation of a massive privatisation policy of public housing**. *"All State housing was given to the local government"*, explains Mikolaj Lewicki, from the University of Warsaw. *"Local authorities were placed at the top of this process of privatising housing built in the communist era and owned by the State, but also more generally in charge of managing housing stock"*. The often somewhat hasty privatisation

conducted by these municipalities came with the demolition of many buildings and premises deemed to be in excessively poor repair. **This privatisation often involved selling the housing unit to the tenants at a very low price:** *"Basically, people were given these apartments"*, notes Mikolaj Lewicki. **The process of privatisation launched in the 1980s and 1990s is ongoing, but is now a process of reprivatisation: there are frequent evictions aimed at returning a property nationalised during the Soviet era to its pre-war owners or, more often, to their legal successors.** The Warsaw Decree remains in force and the municipality estimates that some 447 properties (representing 4,479 occupied housing units) were returned to their former owners under the Decree between 2007 and 2016²¹. **17,000 tenants of city-owned dwellings had the properties they were living in returned to private owners²², and this reprivatisation is sometimes a cause of social tension²³.**

In recent years, Warsaw has also been experiencing slow and low levels of demographic growth (the city grew by 50,000 inhabitants between 2007 and 2016), **together with a sharp rise in housing construction.** Over the same period, some 151,000 housing units were built in the Polish capital, i.e. an annual average of roughly 15,000 housing units²⁴. This trend is gaining momentum as in 2016, *"20,120 dwellings were*

*completed in 2016, which is 51.2% more than in 2015, when 13,306 dwellings were built"*²⁵. Yet 83.9% of the housing units built between 2007 and 2016 were completed by private investors and the production of public housing remains derisory (see below). The start of the 21st century marks the continuation of the Polish State's gradual withdrawal from housing issues; the financial assistance granted to local authorities, including Warsaw, is particularly low and **the share of housing in the national budget is falling.**

The hegemony of owner-occupation in Warsaw and the challenge of gentrification

*"In Poland, the concept of 'affordable housing', as other countries might understand it, does not exist. While Polish housing policy encompasses municipal housing, social housing and cooperative housing, it heavily favours the private ownership model", write Agata Twardoch and Jakub Heciak²⁶. **As in many cities of the former Soviet Union, Warsaw is a city of owners. Owner-occupation has become "both a norm and an indicator of social attainment"** in the city, observes Mikolaj Lewicki. This trend is bolstered through ownership incentives conducted on a State level²⁷: "public intervention, very low on both national and local levels, are confined to encouraging owner-occupation". Agata Twardoch and Jakub Heciak confirm this: "Although the legal framework of housing policy allows for a vast range of housing solutions, ownership-oriented private projects have continued to dominate the market. This reality is partly explained by the fact that Poles are firmly committed to the idea of owning their own homes"²⁸. **All these conditions contribute to making Poland one of the countries with the highest rates of owner-occupation in Europe** (around 82%²⁹).*

However, income levels which are currently stagnating and the increasing inaccessibility of credit prevent young generations from acquiring their own home. They continue to live with their parents until a later age. **At the same time, there is a widespread generational transmission of private properties**, meaning that "the new generation is not striving for autonomy as much as the previous generation" and often properties are passed down from their parents, explains Mikolaj Lewicki.

Warsaw's residential stock

Types of ownership (end 2015)³⁰

48.2% - housing communities
27.1% - cooperatives
14.4% - other
9% - municipal housing
0.4% - *Towarzystwo Budownictwa Społecznego* (TBS), apartments built by municipal housing associations

Number of dwellings: 932,574 (end 2016)³¹

Average useable floor area of a dwelling: 31.3 square metres/inhabitant³²

The properties currently inhabited by owner-occupiers are increasingly dilapidated. Renovating this housing stock is one of the most prominent challenges for Warsaw in terms of affordable housing: "Besides the older housing stock in the central districts of Warsaw, the extensive social housing developments on the outskirts of the city (blocks of flats made of prefabricated concrete slabs in the 1960s and 1970s) will require intensive renovation in the next years"³³. **Improving the quality of existing housing is one of the municipality of Warsaw's priorities.** The city's housing strategy has undergone some significant developments, as presented in a document entitled "Housing 2030". The municipality explains in this document that it intends to abandon some municipal-owned buildings in poor technical conditions as well as properties without bathrooms or kitchens. It also undertakes to ensure that all properties are connected to the central heating network.

Between 2007 and 2017, the City of Warsaw spent over PLN 5.5 billion for the maintenance of municipal flats, out of which 38% is income from rent payments³⁴. Another objective is to reduce the number of coal-based heating furnaces (objective of 0%) and to connect Warsaw's apartments to the central heating network. The adoption of a Warsaw Housing Standard established by the municipality has resulted in a list of criteria to qualify a "good apartment", taking into account a set of considerations related to spatial planning and the efficient management of resources (energy, land, water, materials and waste).



Fig. 34:
old town facades in
Warsaw.

The widespread ownership transfer of Warsaw's private properties to the next generations is one reason why it is difficult for low-income households who are not yet owners to purchase a home. This is compounded by obstacles preventing these households from obtaining a mortgage³⁵, resulting in some of them being pushed out of the city, fuelling a movement of gentrification³⁶.

One striking example of this trend is in Praga Północ, a district with approximately 70,000 inhabitants reputed for its social and economic mix. *"Its diversity is reflected in both the physical, and in the social dimension. Pre-war, neglected, municipally owned tenements are neighbouring new buildings constructed by private developers. The level of unemployment and the share of social assistance beneficiaries is the highest of all of Warsaw's districts [...] At the same time, a gentrification process related to recent inflow of people representing generally a higher income and educational status is taking place"*³⁷, notes a Divercities report. Housing is still inexpensive here and a large percentage of inhabitants have never left the district. The percentage of municipal housing is two times greater than the city's average here. Once considered dangerous, Praga Północ is currently attracting a growing number of commercial and infrastructural investments³⁸ and many new residents, from the migrants who recently arrived in Poland who are looking for affordable housing to the members of the elusive *"creative class"*³⁹ cited by Richard Florida.

Energy insecurity, a key challenge for the renovation of Warsaw's dwellings

An inherent element of any discussions on affordable housing, the issue of the quality of housing offered to low-income households is characterised, in Warsaw's case, by a growing importance of the issue of energy insecurity. The Institute for structural research (*Instytut Badań Strukturalnych, IBS*), an independent scientific foundation specialised in energy issues in Poland, defines energy insecurity as households' difficulty to meet their energy needs, due to insufficient income and/or the characteristics of their dwelling. After having measured energy insecurity in Poland in 2016 on the basis of a LIHC (Low Income, High Cost) indicator, the *IBS* observed that 12% of the Polish population were living in a situation of energy insecurity, which represents 1.3 million households. This situation predominantly affects

individual dwellings, mainly located in rural areas. In contrast to this form of measurements is what Konstancja Ziółkowska, analyst at the *IBS*, deems a subjective measurement, which involves measuring households' perception of their own energy situation. This indicator shows that energy insecurity is concentrated in urban and collective housing. Konstancja Ziółkowska gives the example of the Praga district in Warsaw, in which many dwellings (social and municipal housing in particular) were built before the Second World War and are now dilapidated.

The rental sector at the centre of the affordable housing issue in Warsaw

Unable to secure a mortgage to acquire their own property, many households (in particular the youngest) are forced to fall back on Warsaw's rental market, which is little respected in this city of owner-occupiers. Joanna Erbel notes that *"the wisdom passed on from the post-communist transformation period sees private ownership as the only type of housing able to meet requirements in a safe and respectable way. Communal apartments and their tenants do not have a good image. Not being able to purchase a communal dwelling meant being the loser of the transformation period"*⁴⁰. **The rental segment is partly municipal-owned, which offers Warsaw's inhabitants a range of dwellings in four separate categories according to their personal circumstances.**

Firstly, social housing is aimed at populations deemed to be subject to specific social risks and requiring public assistance and low-rent housing. The rent required of tenants of social housing may not exceed half of the lowest rent applied to municipal or council housing. The latter is the second form of public housing in Warsaw. It is aimed at households with

incomes that are too high for them to qualify for social housing but too low to allow them to become owners. The rents of council housing units are defined according to their location and furnishings. Tenancies are open-ended. A sometimes-negative corollary of this last feature, *"the allocation of council housing does not take into account possible improvements in the financial situation of the tenant"*⁴¹. Some experts are calling for the introduction of mechanisms which would enable municipalities to check that these apartments are really occupied by households requiring such assistance. This segment of the municipal-owned housing stock is currently in serious decline, as observed by the municipality itself, in particular due to the effect of reprivatization as stated above:

“Over a 20-year period, Warsaw's council housing stock decreased by 73,325 dwellings (from 154,888 as at the end of 1995 to 81,563 as at the end of 2016). The period of the biggest decline in the number of dwellings was 1996-2001, with a decrease of 5,500 dwellings per year. Over the following years, the average annual decrease was 2,300 dwellings [...]. The rate of change in the number of council housing units was mainly influenced by two factors: the sale of dwellings to tenants and the restitution of real property to their previous owners or their successors”⁴².



Fig. 35:
residential buildings
in the Praga Polnoc
neighborhood in Warsaw.

Fig. 36:
Warsaw city hall.



The third segment, entitled “Towarzystwo Budownictwa Społecznego” (TBS), represents apartments built by municipal housing associations, aimed at households with incomes exceeding the eligibility thresholds for the two previous housing categories. Once again, the aim is to meet the needs of households who are unable to purchase their own home, as the municipality explains: *“This solution will provide dwellings to families who cannot be granted council flats due to their income but do not have the creditworthiness to purchase their own dwellings, or are not interested in doing so”*⁴³. The wording of this phrase provides proof, if proof were needed, of the perceived superiority of ownership over other types of housing. The construction of TBS housing is financed by public funds. The public bank *Bank Gospodartwa Krajowego (BGK)* provides the majority of the funding for this type of public housing, the remainder coming from TBS associations’ own funds.

Lastly, the municipality of Warsaw offers dwellings for commercial rental, with short- or long-term leases, to households with incomes which exceed the criteria of eligibility for the three other aforementioned categories. This type of housing is *“primarily dedicated to young*

*people to foster their professional and general mobility, and [to] citizens from older age groups, whose residential needs become smaller as their children move out”*⁴⁴.

Most of the growth in the number of dwellings in Warsaw (see above) is unrelated to this municipal stock.

Sociologist Joanna Erbel notes that *“most of the investments are made by commercial companies, for the municipality of Warsaw, the production of more affordable rental housing units is therefore a real challenge”*⁴⁵. Increasing the overall size of the municipal housing stock is one of the municipality’s priorities today. It notes that *“by 2030, the housing stock is expected to increase to 100,000 dwellings”*⁴⁶. On 14 December 2017, the city of Warsaw adopted a multi-year housing resource management plan (2018-2022), confirming its desire to step up municipal housing construction: *“The city will continue to build municipal-owned flats. At least 600 housing units will be built in the years to come due to district investments, while over 1,400 new flats will be provided thanks to the Communal Building Societies”*⁴⁷. **This construction strategy has modest ambitions and one of the objectives is to assist households affected by the reprivatisation process.**

While this stock must be developed to provide low-income households, unable to purchase a home, the option of continuing to live in Warsaw, it also requires significant renovation, as do private dwellings. The municipality notes that:

“ Most city-owned buildings were constructed before World War Two [...] and often require substantial expenditures. The remedial measures will be aimed at: eliminating the delays in renovations [...], improving the quality of buildings and dwellings (renovation, upgrading, adding missing utilities, including heating network connection, new devices and rooms); improving the energy performance of buildings”⁴⁸.



Whether private or public, the rental segment remains a minority form of housing in Warsaw. It has an image of instability and insecurity which still contributes to its lack of popularity. The reasons behind this are the legal framework which barely protects tenants of private dwellings, tenancies of very limited durations (one to two years) and the great latitude granted to private owners. Mikolaj Lewicki confirms that Warsaw's inhabitants see rental housing as *"not comfortable, not a source of security but an only temporary situation"*, and observes that, *"one of the biggest challenges for the rental market in terms of social and cultural positioning is to give this idea that it can be stable and comfortable"*. For now, the poorest households of the Polish capital are reluctantly concentrated in rental housing. *"People who rent are those who are much less stable in terms of their income, much less stable in terms of their social status"*, explains Mikolaj Lewicki.

A consequence of the fragile economic situation of these tenants is the increasing number of rents which are paid late or which are outstanding: *"At the end of 2011 the proportion of homes in council and social housing in which tenants were in arrears in payments was as high as 41 percent"*⁴⁹, writes Dorota Mantey. **This situation also occurs alongside a constant increase in rental debt, that the municipality has identified, because it has made its reduction one of the priorities of its housing policy.** The "Housing 2030" strategic plan states that *"the City of Warsaw will continue its activities preventing rent debt by regularly monitoring outstanding rent to quickly provide assistance to people in difficult life situations"*⁵⁰. Yet perhaps Warsaw's residential stock needs above all a clear change in perception achieved through a clear policy to promote rental housing, according to Mikolaj Lewicki. While the municipality does not yet seem to be working

on changing the negative image of rentals, the Polish State is giving this greater importance, as Joanna Erbel describes:

*"For several years, taking out a mortgage was considered a reasonable choice for many young families, encouraged by national housing programmes to take out such a loan (Rodzina na Swoim) or to purchase new apartments in cheaper (often suburban) areas (Mieszkanie Dla Młodych). In 2015, the situation changed with the new national housing programme, the main objective of which is to support the construction of affordable housing (Mieszkanie+ – Housing+)"*⁵¹.

The affordable nature of such housing is itself increasingly contested, while it is currently estimated that paying off mortgage instalments is less expensive, for Warsaw's inhabitants, than a monthly rent. The city of Warsaw would therefore benefit from focusing in the coming decades on stemming rent increases, protecting the tenants of reprivatised properties and developing the stock of municipal rental housing intended for those households whose income does not allow them to purchase a home. The key to this is to combat gentrification and the negative effects of the reprivatisation operations conducted over the last few decades and to give hope to young low-income households that they can build their future in Warsaw.

Munich

Affordable housing: the future will
be polycentric



The third-largest city in Germany after Berlin and Hamburg, Munich is reputed for its dynamic economy, to the extent that the *Handelsblatt* recently named it “Germany’s own Bay Area”¹, in reference to the California region home to major tech companies and digital start-ups.



Fig. 37: Aerial view of Munich, 2009.

Munich’s buoyant economy and labour market and their national and European appeal do not seem about to falter. The capital of the State of Bavaria, where many major German groups (Allianz, BMW, Siemens) have elected to locate their headquarters, continues to attract highly-skilled workers. Total labour market growth was 3% in 2017², while the unemployment rate in the city was only 4.3%³, the lowest unemployment rate of all German cities with more than 500,000 inhabitants. Munich and its metropolitan area are among the rare areas in Germany in which the population and the number of jobs are still growing under the effect of migratory flows within Germany, the mass arrival of asylum-seekers from 2015 and also positive birth rates⁴.

Munich’s demographic dynamism (the city’s population is set to rise to 1.8 million inhabitants by 2030) generates increasing demand for housing which

the city is currently struggling to meet.

Munich is disadvantaged by the scarcity of available land. Michael Voigtländer, Head of the Research Unit Financial and Real Estate Markets at the German Economic Institute (*IW Köln*), notes that “German cities are faced with a major obstacle: the scarcity of land, particularly in Munich, a city that has grown continuously for the past 30 years”.

Munich - key facts and figures

Population: 1.55 million inhabitants (June 2017⁵) (+28% since 2000⁶)

Unemployment rate: 4.3%⁷

Surface area: 310 km²

Gross domestic product (GDP): €99.8 billion in 2014⁸

A city reputed for the quality of its infrastructures, ranked among the top five cities in the world for its electricity, water, transport and telecommunications systems and networks⁹.

Ulrich Benz, of the Department of Planning and Building Regulations at the city of Munich, states that *"after the end of the Cold War, large areas used for barracks which were formerly on the outskirts of the city but are now considered to be sought-after city-centre locations became available for new urban development projects. However, these plots of land are mostly built on today, meaning that plans for larger projects are only possible in the city's suburbs"*. At the same time, land prices are rising as land becomes scarcer, accounting for up to 60% of total property prices in Munich¹⁰. The annual volume of housing construction (36,000 housing units built between 2011 and 2015 and 7,400 in 2016¹¹) fails to meet the rise in demand, currently estimated at approximately 8,500 new residential units per year, 2,000 of which should be units with moderate or subsidised prices, according to Ulrich Benz. Deutsche Bank Research notes that there is a *"shortage of several tens of thousands of residential units"*, illustrated by a vacancy rate that is near zero (0.2% at the end of 2015 according to Empirica¹²). To this can be added the ageing of the population and the increasing occupation of housing with large surface areas by elderly residents living alone.

In recent years, the combination of these different factors has resulted in a sharp increase in Munich's property prices, together with a growing shortage of affordable housing for low-income households. The average sale price of an apartment in Munich doubled between 2009 and 2017¹³, while the population rose from 1.36 to 1.53 million inhabitants over the same period. A new apartment with a surface area of 80 square metres cost €600,000 in Munich in 2016, compared to €400,000 in Berlin or €280,000 in Mannheim¹⁴, while the average sale price of housing in Munich is currently roughly €7,500/square metre for new-build dwellings and €5,600/square metre in older buildings. Rents are also increasing spectacularly. They rose by 7.4% over 2015¹⁵ alone and reached €18/square metre¹⁶ on the regular market in 2016. Lena Sterzer, researcher at the Technical University of Munich, notes that:

“ The housing market in Munich [...] makes it increasingly hard, particularly for low- and medium-income households, to find affordable housing and sustain a livelihood. The lower a household's income, the higher the share of its income is spent on rent, so that shares of 40% or above have become increasingly common [in Munich]”¹⁷.



Fig. 38:
Dantebad affordable
housing project in
Munich, built by municipal
housing company
GEWOFAG.

Yet while low-income households are finding it increasingly difficult to live in Munich, **this is also the case for medium-income households, who are struggling to find in the most expensive city in Germany the kind of housing they would still be able to afford in other cities:** *"a central location, 3 rooms, kitchen and bathroom with an acceptable layout and balcony. Such apartments are considerably above the means of middle-class employees, which is leading an increasing number of analysts to speak of a crisis"*, writes Jean-Marie Gambrelle about Munich¹⁸. *"All income brackets are affected by the current shortage"*, states Ulrich Benz.

To relieve this situation, the city council has undertaken an ambitious housing construction programme, recently revising its annual housing construction objectives upwards (8,500 residential units per year between 2017 and 2021, as against 7,000 per year before 2016)¹⁹. Its two municipal housing companies, GEWOFAG and GWG, previously focused on maintaining existing stock, are now starting to build again, concentrating most

of their efforts on affordable rental housing for low- and medium-income households. GEWOFAG and GWG have set themselves a joint construction target of 1,250 housing units per year. The two companies currently own 61,300 housing units, 23,000 of which are subsidised, i.e. 7.5% of Munich's total residential stock, making them a major source of affordable housing in the Bavarian capital. **"Municipal housing associations serve to some extent as a regulator on the constantly overstretched Munich housing market"**, notes the city council²⁰. They obtain available land directly from the city council free of charge through ownership transfers and receive regular subsidies, which facilitates their financing from banks, specifies Ulrich Benz.

At the same time, several municipal programmes are striving to overcome the shortage of affordable housing.

The “*Wohnen in München VI*” programme, the sixth edition of a scheme created more than 25 years ago, is the largest municipal housing programme in Germany. Through this new edition of “*Wohnen in München*”, the municipality of Munich will finance, from 2017 to 2021, the construction of affordable and subsidised housing to the tune of €870 million²¹, and in addition some €250 million will be allocated to support construction operations by the aforementioned municipal housing companies²². The “*LaSie*” project (which stands for “*Langfristige Siedlungsentwicklung*”, long-term residential development) strives to densify the city and redevelop spaces that are already built-up (former industrial areas, barracks dating back to the Cold War) to create new residential areas and enhance housing on the outskirts of the city. **Lastly, the “*Wohnen für Alle*” programme rolled out in March 2016 seeks to step up the production of subsidised housing for low-income households** and is set to bring about the construction of 3,000 new housing units by 2019, half of which are built by private developers and supported by State funding of €135 million in the form of loans.

In addition to these strong initiatives to promote densification and housing construction, **the implementation of the Munich model (“*München Modell*”)** can be cited. The aim of this model is to “*achieve a mix of subsidised and privately financed house building for middle- and low-income groups in all locations of the city and even within single development projects*”²³. The model has four basic principles: the principle of socially equal land use; the

Munich model for rental housing (“*München-Modell Miete*”), which develops the affordable rental housing stock through the provision of reduced-price public plots to private and public investors; the Munich model for ownership (“*München-Modell Eigentum*”) which aims to attract middle-income families to the city centre and encourage them to purchase a property; and lastly the reduction of real-estate prices, by selling plots for a fixed price below the market level, that depends not on location but on buyer’s income²⁴.

Nonetheless, this range of measures and schemes has not yet successfully contained the rising property prices or reduced the shortage of affordable housing, as Elisabeth Merk, councillor in charge of urban development, admits: “*Our planning is operating at a strong pace but the drivers behind growth are still going faster*”²⁵. **A consequence of the high property prices is that a growing number of young professionals and low-income households are currently leaving Munich and settling in its surrounding areas which are reputedly more affordable.**

“*Two contrary spatial effects can be observed in the Munich region*”, writes Lena Sterzer. “*On one hand, low-income households tend to prefer an urban environment, which offers more flexible access to job opportunities, small residential units, good public transport supply, and short distances to urban amenities; on the other hand, strong price pressure and a highly competitive housing market are forcing many low-income households to leave the city*”²⁶. This decision often enables them to reduce their ratio of income²⁷ while living in better conditions: “*On average, households leaving the city of Munich and moving to the surrounding area double their residential size while saving up to*

one-fourth of their rent cost per square metre”²⁸.

The future of affordable housing for the inhabitants of Munich therefore appears to hinge not only on the city itself, which may have become irredeemably unaffordable and in which land is set to remain scarce and expensive, but on the broader metropolitan region. It could well also depend on a completely different issue: mobility.

Mobility, the key to affordable housing?

While an increasing number of low-income households are leaving Munich for its metropolitan region, once there they often find much more limited mobility options than in the inner city. Public transportation in the Munich metropolitan region is organised around and concentrated in the city centre, which is reputed for the quality of its transport infrastructure and its public transportation system. In 2010, a study conducted by the University of Stuttgart concluded that Munich had the best public transit system of the 23 European cities ranked for travel times, opportunities to make connections, customer information, and ticket prices²⁹. Ulrich Benz, however, notes that “public transportation must be reinforced as the lines are already overstretched”. At the same time, inhabitants are using their cars increasingly. “The number of new registrations is constantly on the rise: statistically speaking, each person in Munich has a car”, explains Ulrich Benz. Munich’s road infrastructure “forms a radial system merging in the city. The public transport network is radially aligned around it as well”³⁰. Conversely, public transportation becomes scarcer the further away one travels from the centre of Munich.

Mobility in Munich

Munich opened a tram line at the end of the 19th century. In 1971, the city once again invested in its public transportation system by inaugurating its underground service (*U-Bahn*), then its suburban train service (*S-Bahn*) the following year. “These new modes provided the city with a four-level transit system: suburban rail, subway, surface streetcar, and bus”, writes Tony Mazzella, strategic advisor for the Seattle Department of Transportation³¹. The *U-Bahn*, buses and trams are managed by the *Münchner Verkehrsgesellschaft*, Munich’s municipal transportation agency, while the *S-Bahn* is operated by a subsidiary of the German national railway³². Both agencies are integrated into the Munich Transport and Tariff Agency (*Münchner Verkehrs- und Tarifverbund* or *MVV*), the Munich region’s public transit company and authority that oversees the coordination of around fifty transit providers which offer mobility services in Munich and the eight surrounding districts and that manages the network. “Ein ticket für alles – one ticket for everything. The idea is one network, one timetable, and one ticket. The integration of all modes and all providers helps make the rider experience a seamless transition from ticket purchase, to mode of choice, to provider, to transfer, and to final destination”, explains Tony Mazzella³³.

Mode breakdown:

Automobile use: 37% (including 10% passengers)
Walking or cycling: 42%
Public transportation: 21%³⁴

Average distance travelled daily by commuters³⁵:

Munich (mono-centric city): 19 km
Hamburg (mono-centric city): 20.8 km

Stuttgart (polycentric city): 13.5 km
Frankfurt (polycentric city): 16.4 km

***U-Bahn* (underground) and *S-Bahn* (metropolitan rail service) networks:** 27 lines, 140 stations, 500 km of tracks³⁶

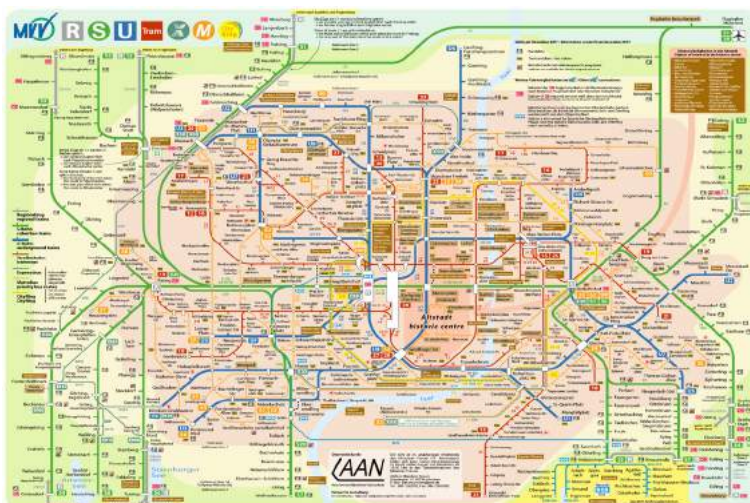


Fig. 39:
Map of the Munich public
transportation network,
2014.

As a result, living on the outskirts increases the cost of mobility and the share of low-income households' budgets devoted to it. Mobility costs are lowest in the core city, followed by municipalities which are connected to the *S-Bahn* network. Inhabitants of rural areas, which are located away from transport axes, pay the highest costs³⁷:

“A lack of local amenities or transit services causes longer trips and increases car dependency. This aggravates the problem of an overloaded transport system, resulting from fast growth regarding the total number of trips within the region. Existent transport systems were not designed to handle the additional demand during peak hours. Time and comfort losses as well as increased mobility costs are the outcome”³⁸.

Lastly, affordable housing in the outskirts is sometimes far from job opportunities and other urban amenities. The expense of transportation and the fewer connections to the public transportation system contribute to worsening the effects of this distance for low-income households. Work conducted by a team of researchers from the Technical University of Munich observed the following:

“A lack of proper regional planning, in terms of labour as well as housing, is resulting in growing distances for both commuting and completing activities, as well as the fulfilling of basic needs”³⁹.



Fig. 40:
Munich's S-Bahn.

Yet the price and quality of mobility services may benefit from being considered as one of the key factors of affordable housing: **is housing really affordable if its location requires a significant extension of its mobility budget? Should mobility be considered as part of the price of housing for households, in that the housing's location dictates mobility behaviour with incomes that are equal? It is therefore essential that mobility be placed at the heart of the housing issue, first of all by no longer considering them as two separate fields.** This is what Munich city council is doing in the new Parkstadt Schwabing district in the north of the city: permission to complete the final third of the housing development was only granted once the developers had committed to financing and building a tram connection. The construction of the tram then enabled the development of 150,000 square metres of commercial floor space and 500 residential units⁴⁰. *"This high-density development with limited parking provision would not be considered feasible without the high quality / high capacity public transport link the tram will provide"*⁴¹, notes the International Association of Public Transport.

The challenge of a combined consideration of affordable housing and mobility must be met on a metropolitan level if the affordable housing supply which remains around Munich is to become a viable solution for low-income households thanks to a mobility service across the metropolitan area. The response to this challenge must involve recreating sub-centres, meaning that the region is no longer a system oriented solely on its main city but conversely a polycentric system. It may well prove that this may be the only approach that will enable Munich to develop affordable housing for low-income households. Greg Clark and Tim Moonen write that *"existing house-building rates are insufficient to meet high demand. Re-development of brownfield sites has so far opened up new land within the city limits, but it is now running out of spaces to re-use, strengthening the case for more polycentric urban development and tangential transport links"*⁴². *"Regional, dense sub-centres with employment opportunities rather than a suburbanization of housing are needed to avoid dormitory towns and reduce employees' trip lengths"*, specify the researchers of the Technical University of Munich⁴³.

However, these sub-centres can only be developed if significant investments are made in mobility. Michael Voigtländer explains: *"We need more investment in public transportation. An easy commute into the city centre means that people can settle outside the urban core; this would greatly relieve the pressure on cities like Munich"*. Elisabeth Merk, councillor in charge of urban planning, is aware of the need for such investment: *"Because stagnation is not an option politically or socially, a well-designed public transportation system – which also stretches to the broader region – must provide strategic support that cannot be rolled out in the city of Munich alone"*⁵³.

The Munich metropolitan region

Founded in 1995, the Munich metropolitan region (or *"Metropolregion München"*) aims to promote the region's economic development with a view to consolidating its attractiveness. In 2008, the Munich European metropolitan region (*"Europäische Metropolregion München"*, EMM) was formed to step up cooperation within the Munich region. *"The EMM has endorsed a range of projects such as high-speed rail and multi-modal ticketing, but [...] wealthy municipalities tend to put their own interests first, and their reliance on property and payroll taxes have made them unwilling to contribute to the costs of growth"*, write Greg Clark and Tim Moonen⁴⁴.

Surface area: 26,000 square kilometres (i.e. 38% of Bavarian territory)⁴⁵

Population: 5.9 million inhabitants⁴⁶ (demographic growth of 20% between 1990 and 2015⁴⁷; Germany's fifth most populous metropolitan region⁴⁸)

Unemployment rate: 3.5%⁴⁹ (compared to a national average of 6.1%⁵⁰)

Gross domestic product (GDP): €200 billion⁵¹ (i.e. more than 50% of Bavaria's GDP)

GDP per capita (2017): €46,352⁵²

Main cities: Munich, Augsburg, Ingolstadt, Landshut, Rosenheim, Kaufbeuren

However, the creation of these new sub-centres requires real and effective cooperation between the municipalities and local authorities of the Munich metropolitan area. *"In order to satisfy housing demand", writes Munich city council, "the State capital's cooperation with councils, municipalities and districts in the surrounding region will grow as they still have the potential to build new housing"*⁵⁴.

There are already initiatives which appear to attest to such a cooperation drive between Munich and the other municipalities and communities in its metropolitan region: one example is the development, by Munich and seven municipalities in the Würmtal⁵⁵, of a *Regional Planning Development Concept for Munich South-West* (*"Raumordnerische Entwicklungskonzept München Südwest"*) which is a joint strategy for housing and mobility⁵⁶. This is also one of the objectives of the Munich Regional Planning Association (*"Regionaler Planungsverband München"*), which is an association of local authorities founded in 1950 to support its members (the city of Munich and 150 municipalities in the surrounding region) in their urban planning initiatives⁵⁷. **Yet Greg Clark and Tim Moonen note that "the existing system of co-operation [...] does not cover the whole functional urban region, and has struggled to devise common approaches. Munich therefore risks entering a low-coordination, low investment equilibrium that could damage future competitiveness"**⁵⁸.

Cooperation with surrounding municipalities continues to be a major challenge for Munich, in particular as regards housing investment, as Michael

Voigtländer reminds: *“One of the problems of Munich is the reluctance of the surrounding, mostly Christian Social democrat [CSU], municipalities to invest in housing, for fear of an inflow of population from predominantly Social-Democrat Munich [SPD] and of an ensuing shift in the electoral balance”*. Ulrich Benz adds that *“it is not at all in the surrounding municipalities’ interest to continue building homes to relieve pressure on Munich, and surrounding municipalities have so far only shown rather limited interest in drawing up a joint strategy on affordable housing on a metropolitan scale”*. According to Greg Clark and Tim Moonen, a lack of consensus between the various stakeholders can be added to this reluctance:

“Munich’s leaders find it hard to generate the urgency or imperative to build infrastructure that will unlock further growth. Mayor Dieter Reiter’s options to address Munich’s growth challenges therefore depend on improving the City’s co-operation with its surrounding region which would provide integrated solutions to housing and transport”⁵⁹.

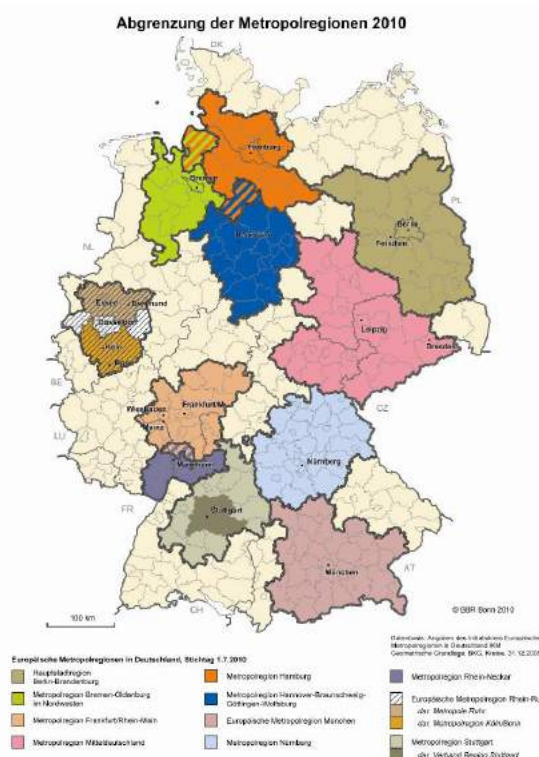


Fig. 41:
map of German metropolitan
regions in 2010.
The Munich metropolitan
region is in the lower right
corner.

This need for further enhanced cooperation to develop affordable housing in the Munich region has led the city of Munich to found the Regional Alliance for Housing Construction and Infrastructure (*“Regionales Bündnis für Wohnungsbau und Infrastruktur”*). The Alliance’s mission is to work with towns and communities in the Munich region to identify land which may be used for housing, as Elisabeth Merk explains⁶⁰:

“Growth does not end at the city limits, and so the Regional Alliance for Housing Construction and Infrastructure [*Regionales Bündnis für Wohnungsbau und Infrastruktur*] was established to work together with towns and communities in the region to make more land available for home building”.

In November 2015, the Alliance brought together several representatives of the metropolitan region who travelled to Berlin to call for more support from the Federal Minister of Transport and the Bavarian Minister of the Interior for the development of mobility infrastructure and housing construction. This action resulted in a promise, from both ministers contacted, to build a second central *S-Bahn* line in Munich, known as the “second Stammstrecke”, which is set to enter into operation in 2026⁶¹.

This initiative should come with more commitment from the state of Bavaria, according to Greg Clark and Tim Moonen: *“The City requires the state of Bavaria to take a leadership role to strengthen the inter-municipal relationships that can ensure the supply of new residential, commercial and transport functions beyond city boundaries”*⁶². The researchers explain that the voting constituency of the Bavarian government, which has been dominated by the CSU party since the end of the Second World War, does not encourage integrated and effective metropolitan regional urban planning. They also observe that Munich today is practically lacking a *“functional metropolitan government”*, which would require the State of Bavaria to take a leadership role and develop an *“enabling framework”*⁶³. It may be that Munich can hope to stem the housing shortage by taking a broader look at the issue of affordable housing, which would include daily mobility issues, and by going beyond the municipal level to extend to the metropolitan and regional levels.



Fig. 42: Munich city centre.

Bordeaux

How can the conditions of
affordable homeownership be
recreated?



Fig. 43:
The Bordeaux tramline, in
operation since 2003.

Is Bordeaux a victim of its attractiveness?

The Bordeaux metropolitan area, which includes the city of Bordeaux and 26 municipalities in its conurbation, currently has some 770,000 inhabitants. **Its population is set to reach one million by 2030**, a prediction which illustrates its strong demographic growth, two times greater than the national average. This dynamism is a result of Bordeaux's attractiveness and the ambitious development policy implemented by the metropolitan area. **While inhabitants of the Bordeaux metropolitan area preferred to live in the inner suburbs and even outside of what was then known as the Bordeaux urban community until the end of the 1990s, this changed as of the early 2000s:** "We managed to reverse the trend by adopting a comprehensive urban project. We did not just create a tram line, we also worked on public spaces and the city has once again become attractive because of this work", explains Michèle Laruë-Charlus, former head of urban planning at Bordeaux Métropole, currently in charge of the *Bordeaux 2050* mission.

Further boosted in 2017 by the inauguration of the high-speed train line that connects Bordeaux and Paris in two hours, this attractiveness has resulted in a sharp rise in the city's housing prices. **This price increase reflects great strain on rental stock and a considerable rise in property sale prices; with the price of existing properties curiously exceeding prices of new-build housing.** While they used to grow at the same pace as households' incomes, housing prices started to deviate increasingly from the start of the 2010s, inciting young people in particular to leave the metropolitan area¹. The average rent is currently €10.5/square metre in the Bordeaux metropolitan area, while the median rent is €11 per square metre².

Yet the attractiveness behind these figures is not the only reason for what is being called a housing crisis today in Bordeaux. **Is the**



Bordeaux metropolitan area victim of a classic syndrome, common to many major European cities experiencing growth: the scarcity of available land?

Michèle Laruë-Charlus does not believe this: "The housing crisis in Bordeaux is not due to a lack of land, we have many plots!". In her opinion, this housing crisis is much more a result of the process by which it is still too difficult to use this land. Most of the housing units under construction or to be built in Bordeaux are part of development operations³. Yet this trend in which development operations almost have a monopoly in housing production is recent, as Michèle Laruë-Charlus reminds, "until around 2010, 80% of housing units built or renovated in Bordeaux were done so in a diffuse manner".

Development operations, conversely, are characterised by the length of their implementation: they must be planned out and voted and what is more, in Bordeaux, they have experienced significant delays due in particular, according to Michèle Laruë-Charlus, to "constant amendments to regulations, particularly from the French State, the long time it takes to implement them, long decision-making deadlines and an increasing number of appeals".

The development of the Bastide-Niel joint development zone (ZAC), which should have begun ten years ago, is only starting now, while

the roll-out of the Bordeaux-Euratlantique operation of national interest (OIN) was blocked by questions regarding the risk of flooding on Bordeaux's right bank, as was the development of the Brazza district.



Fig. 44:
View of the Bassins
à flot district
operation during
the redevelopment
phase, Bordeaux.

Louis Bousquet, project manager at EDEN Promotion, **believes that the rise in Bordeaux's housing prices is due to a more general phenomenon of 'metropolisation' specific to the context in France:** "People want to enjoy all the amenities and to be closer to city centres. There is therefore a mobility issue which explains the general increase in property prices in major cities and in particular in Bordeaux which has conducted a proactive policy in recent years now meaning that it is ranked top of the most attractive towns in France". Louis Bousquet also reminds of the significant increase in housing construction prices, which is due to the rise in regulatory restrictions on environmental, societal and fiscal aspects which apply to production.

Another cause of the rising housing prices in Bordeaux is the soaring land prices in recent years. "In Bordeaux, investor appetite, the renovation of the city centre and the speculative effect have resulted in land prices being tripled in 20 years", explains Louis Bousquet. **This increase can also be explained by urban spread, the adverse effects of which contribute to the restored attractiveness of city centres.** Highlighted as early as the 1950s on grounds that investing in property

would enable households to build up assets and that ownership would enhance property market liquidity and increase social diversity, France's ownership model stimulated significant development of suburban housing across France while causing the urbanisation of agricultural land. The urban spread that resulted from this policy gave rise to significant infrastructure costs. "Bordeaux is totally saturated because of its ring road, which is a big problem", explains Louis Bousquet.

Lastly, land prices are also rising due to tax policies: "Land prices are subject to the law of supply and demand, they are driven upwards by developers who sell properties through the

incentive of tax credits and therefore purchase land at increasingly high prices, because if they do not purchase land, they will not implement any projects and their survival is at stake", concludes Louis Bousquet.

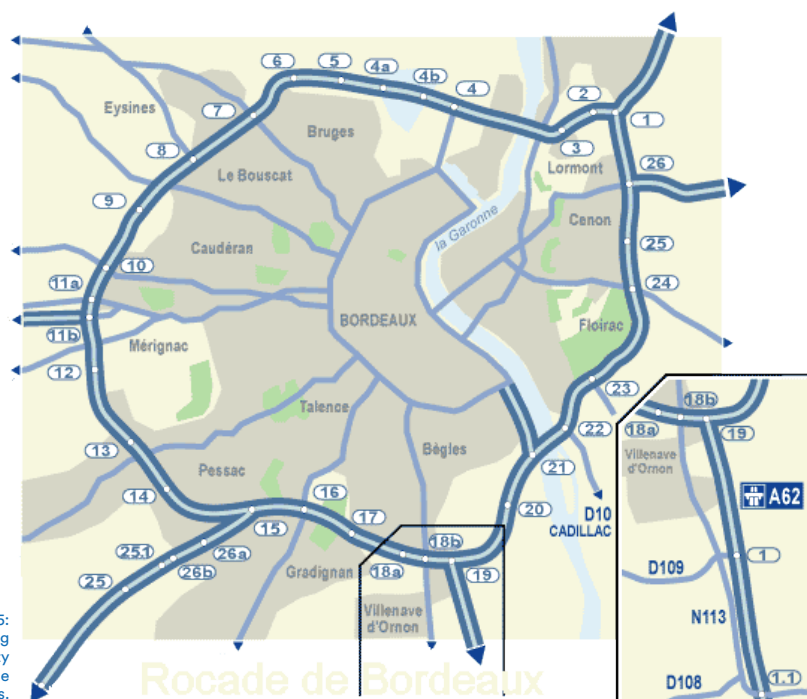


Fig. 45:
In dark blue, the ring
road around the city
of Bordeaux and the
surrounding municipalities.

Homeownership: a challenge in Bordeaux?

The effects of the rising property prices in Bordeaux are felt more acutely today by young households. There are many such households in Bordeaux: one in three inhabitants in the metropolitan area is under 25 years of age, while 40% of the few thousand people who come to live in the area each year are aged between 24 and 40. **This population is finding it very difficult to purchase a home in the metropolitan area.** 70% to 80% of housing units (with the exception of social and affordable housing) are acquired by investors and not owner-occupiers, due to the difficulties that households are currently experiencing to become homeowners.

The metropolitan area is fully aware of the scale of the challenge of affordable homeownership for young families. Back in 2013, two years before *Bordeaux Métropole* was founded, a study by the Bordeaux urban planning agency observed that “only 15% of households in the conurbation had incomes allowing them to purchase new housing built in the Bordeaux urban community”⁵. Flore Scheurer, urban planner and project leader at Bordeaux Métropole, notes that “the challenge concerns affordable homeownership, the kind that we no longer have today in Bordeaux, and yet affordable ownership means families. We have a demographic structure characterised by a large number of young students, a number of elderly people and people living alone, with households of 1.8 on average.

Housing these people has been a challenge for a few years, but it has become even more so with the increase in prices”.

It should be observed that there is a poor fit between households’ income (in particular among the younger households) and property prices, which amount to €3,500/square metre in new-build properties and to more than €4,500/square metre in existing properties. The Bordeaux metropolitan area is therefore not a victim of a shortage of land or affordable housing in the area but rather of a lengthening of daily commutes. This added time contributes to eroding the attractiveness of housing in municipalities around Bordeaux and motivates aspirations to return to Bordeaux city centre, a move which the soaring prices have made impossible for low- and even medium-income households who wish to settle there.

How, then, can an affordable housing stock aimed at families in Bordeaux be reconstituted while attractiveness continues to have an effect on housing prices?



Fig. 46:
a traditional “échoppe”.

“Volumes capables”, a solution for the future

Faced with the challenge of providing homeownership options to young households, **the Bordeaux metropolitan area has developed, in partnership with the private sector, the solution of “volumes capables”.** Michèle Laruë-Charlus describes the inception of the concept:

“We observed that nobody can purchase a 80 m² or 100 m² housing unit at €4,500 per square metre, and young households definitely cannot. We considered the issue from the demand side, taking the case of a young couple who had been forced to leave Bordeaux, which has become too expensive, and who would now wish to come back to the city. This couple would have two children and a budget of €200,000, from the sale of their house 40 kilometres from Bordeaux. To welcome this household, we would have to successfully produce housing with a cost per square metre within the range of €2,100 to €2,400”.

To reach this objective, the metropolitan area tackled two questions. Firstly, how can sufficiently inexpensive land be used in line with the cost restriction that was set? Secondly, what architectural form should be given to these housing units

with the same goal in mind? “To achieve this, we decided to use public land that we owned and to sell it with property taxes set by the local authority, according to the countdown method. This is what we did with the Brazza project, for which we owned land”.

Yet how can a developer be obliged to deliver a completed housing unit at such a low price? This dilemma led the metropolitan area to come to the following concept: “a surface area which complied with standards and was directly habitable, equipped with some basic fixtures (toilet block and sink, walls and windows, a light source, arrival of liquids), but for which finishing touches and layout would be entirely left to the buyers. We called this method ‘volumes capables’”, notes Michèle Laruë-Charlus. Louis Bousquet explains the configuration of the ‘volumes capables’ solution, implemented in the Brazza district on Bordeaux’s right bank:



Fig.47: the “volumes capables”.

“You buy an 18-m² studio apartment that complies with applicable housing standards (RT 2012 law, law on disabled access) next to which there is a 50 m² volume and a 5-metre ceiling height. The buyer can then adapt the space with more expensive fixtures if they can afford to. By creating a false floor, for example, an additional 50 m² of habitable surface area can be recovered. The idea is therefore to enable the buyer to have a fixed section and an adaptable section of collective housing in the city, without having to go through complex administrative formalities. A young couple without children may live in the studio section and gradually convert one and then two bedrooms through a loan which would remain relatively low”.

Likely to attract households with limited resources and other wealthier households wishing to conduct major work or use the services of an architect, ‘volumes capables’ also fulfil an objective of social diversity:

“In streets with ‘volume capable’ housing, you will not be able to tell who lives behind the façades: there will be wealthy people, low-income families, young households who are good at DIY. ‘Volumes capables’ are also a means of ensuring the presence of owner-occupiers and to minimise tax exemption and rentals. We know that a new district with owner-occupiers operates better than a district with a high turnover of tenants”, explains Michèle Laruë-Charlus. Furthermore, in addition to providing a solution to affordable homeownership, ‘volumes capables’ also meet users’ increasing demand for tailor-made housing and contributes to the rapid rise in self-construction projects: “For buyers, the main selling point of ‘volume capable’ housing so far is not always the price; it’s the adaptability, the option of making the place your own. We see buyers who like the idea of the ‘volume capable’ and others who could not be able to buy a property in Bordeaux without ‘volumes capables’”, explains Flore Scheurer.

How, then, can speculation be prevented, which would mean that ‘volumes capables’ would be purchased solely by wealthy households rather than the population in whose interest the concept was designed? The metropolitan area’s response to this question was to set a ceiling of resources applicable to the first buyer of a ‘volume capable’ housing unit. *“We ensure that the first person to purchase the ‘volume capable’ is subject to income conditions, even if the ‘volume capable’ is not necessarily designed for that”, stresses Flore Scheurer. “We use the ‘volumes capables’ in Brazza as an affordable*

homeownership solution. We provide assistance to buyers and therefore have the right to review their income”.

The ‘volumes capables’ solution is still fledgling, and its economic model has yet to prove its viability.

The existing ‘volumes capables’ were only built and completed at the announced cost through considerable equalisation. Yet Flore Scheurer believes that more in-depth considerations on the architectural form and choice of land for future ‘volumes capables’ housing may well result in such equalisation being avoided in future: *“We must work on different aspects: construction methods, the intelligence of the architectural design which makes it very simple and therefore not very expensive. I think that some of the operators who have already produced ‘volumes capables’ have already started to think about how to avoid equalisation but have not yet reached full autonomy for the product, in particular due to certain aspects such as the façade structure or land costs”.*

The scope to replicate ‘volumes capables’ and their economic viability seem predominantly dependent on land management and prices.

“Without land management, it is clearly more difficult to produce affordable housing”, explains Flore Scheurer. Despite its location, the land selected for the Brazza project, on the banks of the Garonne river, was relatively inexpensive because it was both in a flood area and polluted. The metropolitan area had to incur substantial costs to clean up the area. “Landowners facing a UNESCO-listed city must be aware that land only really has value if it can be developed. In the meantime, it is so polluted that it is worth almost nothing and nothing can be done there without investing significant amounts. Land prices must be in line with the product if we do not want to rely

on equalisation”, notes Flore Scheurer. Louis Bousquet confirms this: “In theory, land in Brazza is not expensive, but we are starting to realise that there are considerable decontamination costs. The equation is much more complex than we thought it would be”.

Bordeaux Métropole is showing the will to take action more generally on available land in its area, which is a key factor of housing prices and determines the production of affordable housing.

It criticises an “inflation of land prices”, which “runs the risk of adversely affecting Bordeaux’s attractiveness”, according to Alain Juppé⁶, Mayor of Bordeaux and President of *Bordeaux Métropole*. The metropolitan area announced in January 2017 that “the current situation of tension and land price increases, together with local authorities’ financial limitations, has led Bordeaux Métropole to review its intervention strategy”⁷.

Against this backdrop, Bordeaux Métropole signed a framework agreement in January 2018 with the public land management authority (EPF) of Nouvelle-Aquitaine. Through this agreement, it hopes to be able to reverse the rise in land prices. The mission of the EPF of Nouvelle-Aquitaine, a public industrial and commercial undertaking (EPIC), is to “implement land strategies in order to use land, foster sustainable development and combat urban spread”. These strategies must “contribute to the production of housing, and social housing in particular, by taking into consideration the priorities defined by local housing programmes”⁸.

The cooperation between *Bordeaux Métropole* and the EPF of Nouvelle-Aquitaine paves the way for land pre-emption, a technique that Alain Juppé recently called “an atomic weapon”⁹. The EPF is authorised to “purchase land, ensure a finance scheme for it and to release it upon the request of authorities” and to “intervene on the

market in an authoritative manner by pre-empting land requested by elected representatives”¹⁰.

Bordeaux Métropole has also asked municipalities “not to sell their land at the highest price”¹¹ and, following negotiations with the private sector, has asked property developers to set land prices upon acquisition in accordance with the land’s market or fair value, and not in accordance with its project value. Jacques Mangon, Vice-President of *Bordeaux Métropole*, notes that “today, operators often negotiate land prices on the basis of the project value, calculated in accordance with the maximum use of surface area rights, which results in higher property prices”¹². Breaches of this process may be sanctioned by pre-emption. In another land management lever, *Bordeaux Métropole* intends to disclose, for all operations with a surface area greater than 1,000 square metres, the price and type of construction that it deems preferable¹³ through the issuing of dedicated information sheets. This strategy is based on a partner-based dynamic which appears to be showing results: in May 2018, the Aquitaine Poitou-Charentes property developers federation announced its wish to reduce land prices on the regular market from €1,000/square metre to €600/square metre, in a return to the prices in practice two years ago.

These avenues are set to enable Bordeaux Métropole to curb rising land prices, a necessary move if future operations like the ‘volumes capables’ concept are to be a success.

Yet the economic balance of such solutions does not depend solely on land prices. Their success is also based on the architectural

form selected. The ‘volumes capables’ with double heights are the most modulable, but also the most complicated and expensive. A more compact architectural form would reduce costs further. Flore Scheurer explains that the ‘volumes capables’ built in Braza “are highly divided. They have 3.5 outer façades. They are small buildings with 16, 20, 22 housing units”. Greater savings made in the design could be the means to replicate ‘volumes capables’ without equalisation and even in areas under strain. “This could be replicated in Bordeaux”, confirms Flore Scheurer; “you simply need buildings contiguous to each other, like Haussmann-style buildings”. The simplicity of the façades and the reduction in the number of architectural restrictions are some of the solutions through which EDEN has successfully replicated ‘volumes capables’ in the city of La Rochelle, in which the housing market is also under strain¹⁴.

How does Bordeaux Métropole intend to assess the ultimate success of the ‘*volumes capables*’? Firstly, by their ability to produce affordable housing and to reduce equalisation as much as possible. **Another criterion is their ability to reach their target, low- and medium-income households wishing to become homeowners in Bordeaux.** *“We came up with the concept of ‘volumes capables’ because attracting families to Bordeaux is not just a question of prices, it is also a question of services and public facilities, quality of life, security, mobility, image and happiness”, explains Flore Scheurer. “‘Volumes capables’ are a means of living as you would in a house, to decide on the property’s layout as desired. In Bordeaux, we are not only working towards providing inexpensive housing, because we know that this is not what will attract people”.*



Fig. 48:
downtown
Bordeaux.

Project timeline



Acknowledgements

Paris

Ian Brossat, Deputy Mayor of Paris responsible for housing, sustainable construction and emergency accommodation

Valérie Mancret-Taylor, Director-general, *Agence nationale de l'habitat (ANAH)*

Patrick Rubin, architect, Canal Architecture

Bernard Coloos, Head of Economic, Financial and International Affairs at the *Fédération Française du Bâtiment (FFB)*

André Yché, Chairman of the Board, *CDC Habitat*

Martin Omhové, Director of the Habitat and Society Department, *Institut d'aménagement et d'urbanisme de la région Île-de-France (IAU)*

Anne-Claire Davy, researcher, Habitat and Society Department, *Institut d'aménagement et d'urbanisme de la région Île-de-France (IAU)*

Lucille Mettetal, researcher, Habitat and Society Department, *Institut d'aménagement et d'urbanisme de la région Île-de-France (IAU)*

Emmanuel Trouillard, researcher, Habitat and Society Department, *Institut d'aménagement et d'urbanisme de la région Île-de-France (IAU)*

London

James Murray, Deputy Mayor for Housing and Residential Development, Greater London Authority

Christian Hilber, Professor of Economic Geography, Department of Geography and Environment, London School of Economics

Luke Murphy, Associate Director for the Energy, Climate, Housing and Infrastructure Team, Institute for Public Policy Research

Kath Scanlon, Research Fellow, London School of Economics

Christine Whitehead, Professor Emeritus in Housing Economics, London School of Economics

Berlin

Dirk Böttcher, Urban Development and Housing Department, Berlin State Senate

Kristof Laser, Urban Development and Housing Department, Berlin State Senate

Sigmar Gude, sociologist and urbanist, founding member of Topos

Michael A. LaFond, urbanist, id22

Mary Dellenbaugh-Losse, urban planner

Daniel Hofmann, Managing Director, *GEWOS Institut für Stadt-, Regional- und Wohnforschung GmbH*

Jochen Lang, Director of the Housing, Housing Construction, Urban Renewal and Social City Department, Berlin State Senate

Michael Voigtländer, Head of the Research Unit Financial and Real Estate Markets at the German Economic Institute (*IW Köln*)

Bordeaux

Michèle Larué-Charlus, Head of *Bordeaux 2050*, Bordeaux Métropole; member of *La Fabrique de la Cité's* Steering Committee

Louis Bousquet, Head of the Bordeaux Aquitaine branch, EDEN Promotion

Flore Scheurer, urban planner and project leader, Regional Upgrading Division, *Bordeaux Métropole*

Munich

Ulrich Benz, Munich City Council

Stockholm

Anna Granath Hansson, researcher, Royal Institute of Technology (*Kungliga Tekniska Högskolan*)

Jonas Högset, Director of Real Estate and Housing at the Swedish Association of Municipal Housing Companies (*SABO*)

Ann-Margarethe Livh, Vice Mayor of Stockholm responsible for housing and democracy

Carl Dahlström, political advisor to Ann-Margarethe Livh

Warsaw

Joanna Erbel, sociologist

Konstancja Ziółkowska, analyst, Institute for structural research (*Instytut Badań Strukturalnych*)

Mikołaj Lewicki, Social Psychology Department, Institute of Sociology, University of Warsaw

End notes

Stockholm

- 1 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. *International Journal of Housing Policy*, 2017. DOI: 10.1080/19491247.2017.1278581
- 2 HALL, T/VIDÉN, S. The Million Homes Programme: a review of the great Swedish planning project. *Planning Perspectives* [on-line]. 2005, vol. 20, n°3. Available at: <https://www.tandfonline.com/doi/abs/10.1080/02665430500130233>. (Viewed on 4 June 2018)
- 3 Housing in Sweden: An Overview. [on-line]. Berkeley: Turner Center for Housing Innovation, UC Berkeley, 2017, 21 p. Available at: http://turnercenter.berkeley.edu/uploads/Swedish_Housing_System_Memo.pdf. (Viewed on 5 June 2018)
- 4 WELIN, L/BILDSTEN, L. The housing market in Sweden: a political-historical perspective. In: *Proceedings of the 9th Nordic Conference on Construction Economics and Organization Gothenburg, Sweden*. [on-line]. 2017. Available at: http://lup.lub.lu.se/search/ws/files/29191948/CEO2017_paper_4.pdf (Viewed on 4 June 2018)
- 5 HALL, T/VIDÉN, S. The Million Homes Programme: a review of the great Swedish planning project. *Planning Perspectives* [on-line]. 2005, vol. 20, n°3. Available at: <https://www.tandfonline.com/doi/abs/10.1080/02665430500130233>. (Viewed on 4 June 2018)
- 6 ZILLIACUS, C.P. A million new housing units: the limits of good intentions. In: *New Geography* [on-line]. Published on 7 September 2013. <http://www.newgeography.com/content/003811-a-million-new-housing-units-the-limits-good-intentions>. (Viewed on 7 June 2018)
- 7 Ibid.
- 8 LIND, Hans. The Swedish Housing Market from a Low Income Perspective. *Critical Housing Analysis* [on-line]. 2017, vol. 4, n°1, p.150-160. Available at: <http://www.housing-critical.com/viewfile.asp?file=2467>. (Viewed on 8 June 2018)
- 9 DOUGHERTY, Carter. Stopping a Financial Crisis, the Swedish Way. In: *The New York Times* [on-line]. Published on 22 September 2008. <https://www.nytimes.com/2008/09/23/business/worldbusiness/23krona.html>. (Viewed on 6 June 2018)
- 10 LIND, Hans. The Swedish Housing Market from a Low Income Perspective. *Critical Housing Analysis* [on-line]. 2017, vol. 4, n°1, p.150-160. Available at: <http://www.housing-critical.com/viewfile.asp?file=2467>. (Viewed on 8 June 2018)
- 11 Ibid.
- 12 The story of Sweden's housing crisis. In: *TheLocal.se* [on-line]. Published on 28 August 2017. <https://www.thelocal.se/20170828/the-story-of-swedens-housing-crisis>. (Viewed on 5 June 2018)
- 13 Ibid.
- 14 Ibid.
- 15 European Commission. European Construction Sector Observatory, country profile Sweden. [on-line]. Available at: https://ec.europa.eu/growth/sectors/construction/observatory_en. (Viewed on 4 June 2018)
- 16 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. *International Journal of Housing Policy*, 2017. DOI: 10.1080/19491247.2017.1278581
- 17 Housing in Sweden: An Overview. [on-line]. Berkeley: Turner Center for Housing Innovation, UC Berkeley, 2017, 21 p. Available at: http://turnercenter.berkeley.edu/uploads/Swedish_Housing_System_Memo.pdf. (Viewed on 5 June 2018)
- 18 Ibid.
- 19 STEINMETZ, Hélène. Les politiques du logement en Europe : comparaisons. *Cahiers français*, 2015, n°338, p. 8-14.
- 20 LIND, Hans. The Swedish Housing Market from a Low Income Perspective. *Critical Housing Analysis* [on-line]. 2017, vol. 4, n°1, p.150-160. Available at: <http://www.housing-critical.com/viewfile.asp?file=2467>. (Viewed on 8 June 2018)
- 21 The story of Sweden's housing crisis. In: *TheLocal.se* [on-line]. Published on 28 August 2017. <https://www.thelocal.se/20170828/the-story-of-swedens-housing-crisis>. (Viewed on 5 June 2018)
- 22 LIND, Hans. The Swedish Housing Market from a Low Income Perspective. *Critical Housing Analysis* [on-line]. 2017, vol. 4, n°1, p.150-160. Available at: <http://www.housing-critical.com/viewfile.asp?file=2467>. (Viewed on 8 June 2018)
- 23 Ibid.
- 24 CROUCH, David. Pitfalls of rent restraints: why Stockholm's model has failed many. In: *The Guardian* [on-line]. Published on 19 August 2015. <https://www.theguardian.com/world/2015/aug/19/why-stockholm-housing-rules-rent-control-flat>. (Viewed on 6 June 2018)
- 25 LIND, Hans. The Swedish Housing Market from a Low Income Perspective. *Critical Housing Analysis* [on-line]. 2017, vol. 4, n°1, p.150-160. Available at: <http://www.housing-critical.com/viewfile.asp?file=2467>. (Viewed on 8 June 2018)
- 26 Ibid.
- 27 Spotify SE. We have to act or get bored! An open letter from Daniel Ek and Martin Lorentzon, founders of Spotify. In: *Spotify on Medium* [on-line]. (11 April 2016) Available at: <https://medium.com/@SpotifySE/vi-m%C3%A5ste-agera-eller-bli-omsprungna-383bb0b808eb> (Viewed on 6 June 2018)
- 28 The story of Sweden's housing crisis. In: *TheLocal.se* [on-line]. Published on 28 August 2017. <https://www.thelocal.se/20170828/the-story-of-swedens-housing-crisis>. (Viewed on 5 June 2018)
- 29 JOHNSON, Göran. Affordable Housing – Position Statements for Stockholm [on-line]. Stockholm: Stockholm County Council Office of Regional Planning, 2010, 20 p. Available at: http://www.eurometrex.org/Docs/Expert_Groups/Affordable_Housing/Affordable_Housing_Position_Statement_Stockholm.pdf. (Viewed on 7 June 2018)
- 30 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. *International Journal of Housing Policy*, 2017. DOI: 10.1080/19491247.2017.1278581
- 31 Ibid.
- 32 JOHNSON, Göran. Affordable Housing – Position Statements for Stockholm [on-line]. Stockholm: Stockholm County Council Office of Regional Planning, 2010, 20 p. Available at: http://www.eurometrex.org/Docs/Expert_Groups/Affordable_Housing/Affordable_Housing_Position_Statement_Stockholm.pdf. (Viewed on 7 June 2018)
- 33 Stockholmshem. Stockholmshusen [on-line]. Available at: <http://www.stockholmshem.se/Nyproduktion/Stockholmshusen/>. (Viewed on 8 June 2018)
- 34 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. *International Journal of Housing Policy*, 2017. DOI: 10.1080/19491247.2017.1278581
- 35 SABO. SABOS Kombohus, forcing construction prices down by 25%. [on-line] Available at: <https://www.sabo.se/document/sabos-kombohus-forcing-construction-prices-down/>. (Viewed on 7 June 2018)
- 36 Ibid.
- 37 <https://www.macrovoices.com/macrovoices-content/list-research-roundup/1447-the-swedish-housing-market-primer-dec-20th-2017/file>
- 38 https://www.trafikverket.se/contentassets/773857bcf506430a880a79f76195a080/forskningsresultat/effect_of_minimum_parking_requirements.pdf
- 39 SABO. SABOS Kombohus. [on-line] Available at: <https://www.sabo.se/in-english/sabos-kombohus/>. (Viewed on 7 June 2018)
- 40 Ibid.
- 41 SABO. How Sabos Kombohus affects local housing market. [on-line] Available at: <https://www.sabo.se/document/sabo-analysis-how-sabos-kombohus-affect-local-housing-markets/>. (Viewed on 7 June 2018)
- 42 MAGNUSSON, L/TURNER, B. Municipal Housing Companies in Sweden – Social by Default. *Housing, Theory and Society* [on-line]. 2008, vol. 25, n°4, p. 275-296. Available at: https://www.tenlaw.uni-bremen.de/literature/HTS_vol25_no4_2008sweden.pdf. (Viewed on 5 June 2018)
- 43 Ibid.
- 44 LIND, Hans. The Swedish Housing Market from a Low Income Perspective. *Critical Housing Analysis* [on-line]. 2017, vol. 4, n°1, p.150-160. Available at: <http://www.housing-critical.com/viewfile.asp?file=2467>. (Viewed on 8 June 2018)
- 45 Beacon. Housing Affordability in Europe – Background: Housing in Sweden – Information from desktop research [on-line]. Stockholm: Beacon, 10 p. Available at: http://www.beaconpathway.co.nz/images/uploads/Background_Housing_in_Sweden.pdf. (Viewed on 8 June 2018)
- 46 MAGNUSSON, L/TURNER, B. Municipal Housing Companies in Sweden – Social by Default. *Housing, Theory and Society* [on-line]. 2008, vol. 25, n°4, p. 275-296. Available at: https://www.tenlaw.uni-bremen.de/literature/HTS_vol25_no4_2008sweden.pdf. (Viewed on 5 June 2018)
- 47 Beacon. Housing Affordability in Europe – Background: Housing in Sweden – Information from desktop research [on-line]. Stockholm: Beacon, 10 p. Available at: http://www.beaconpathway.co.nz/images/uploads/Background_Housing_in_Sweden.pdf. (Viewed on 8 June 2018)
- 48 Ibid.

London

- 1 KHAN, Sadiq. We're starting to fix London's housing crisis. But the government has to help. In: *The Guardian*. [on-line]. Published on 27 October 2017. <https://www.theguardian.com/commentisfree/2017/oct/27/were-starting-to-fix-londons-housing-crisis-but-the-government-has-to-help>. (Viewed on 12 September 2018)
- 2 CHU, Ben. UK houses now cost almost eight times average earnings, says ONS. In: *The Independent*. [on-line]. Published on 26 April 2018. <https://www.independent.co.uk/news/business/news/uk-house-prices-average-earning-ratio-latest-unaffordable-housing-crisis-a8323086.html>. (Viewed on 12 September 2018)
- 3 EDWARDS, Michael. Prospects for land, rent and housing in UK cities. [on-line]. Working paper. London: Government Office for Science, Foresight, 2015, 55 p. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/440527/15-28-land-rent-housing-uk-cities.pdf. (Viewed on 11 June 2018)
- 4 Ibid.
- 5 The ratio of income is the ratio between total expenses related to the primary home and the household's income (source: INSEE – French national institute for statistics and economic research). For tenants, these expenses include the payment of rent and charges in addition to housing tax. For homeowners, they include the repayment of a mortgage taken out to purchase the housing and the payment of condominium fees and land and housing taxes.
- 6 HILBER, Christian. UK Housing and Planning Policies: the evidence from economic research. [on-line]. London: Centre for Economic Performance, London School of Economics, 2015, 16 p. Available at: <http://eprints.lse.ac.uk/61745/1/ea033.pdf>. (Viewed on 13 June 2018)
- 7 BARRETT, S/DILKE, T. Strength in Numbers: Funding and Building More Affordable Housing in London. [on-line]. Policy report. London: Centre for London, 2017, 71 p. Available at: https://www.centreforlondon.org/wp-content/uploads/2017/03/CFUJ5181_strength_in_numbers_policy_report_0217_WEB.pdf. (Viewed on 12 June 2018)
- 8 EDWARDS, Michael. Prospects for land, rent and housing in UK cities. [on-line]. Working paper. London: Government Office for Science, Foresight, 2015, 55 p. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/440527/15-28-land-rent-housing-uk-cities.pdf. (Viewed on 11 June 2018)
- 9 Ibid.
- 10 BARRETT, S/DILKE, T. Strength in Numbers: Funding and Building More Affordable Housing in London. [on-line]. Policy report. London: Centre for London, 2017, 71 p. Available at: https://www.centreforlondon.org/wp-content/uploads/2017/03/CFUJ5181_strength_in_numbers_policy_report_0217_WEB.pdf. (Viewed on 12 June 2018)
- 11 SCANLON, K/WHITEHEAD, C/BLANC, F. A Sustainable Increase in London's Housing Supply. [on-line]. Research report. London: London School of Economics, 2018, 24 p. Available at: http://londonhousing.org/wp-content/uploads/2018/01/REPORT_LSE_KEI_digital.pdf. (Viewed on 13 June 2018)
- 12 BARRETT, S/DILKE, T. Strength in Numbers: Funding and Building More Affordable Housing in London. [on-line]. Policy report. London: Centre for London, 2017, 71 p. Available at: https://www.centreforlondon.org/wp-content/uploads/2017/03/CFUJ5181_strength_in_numbers_policy_report_0217_WEB.pdf. (Viewed on 12 June 2018)
- 13 SCANLON, K/WHITEHEAD, C/BLANC, F. A Sustainable Increase in London's Housing Supply. [on-line]. Research report. London: London School of Economics, 2018, 24 p. Available at: http://londonhousing.org/wp-content/uploads/2018/01/REPORT_LSE_KEI_digital.pdf. (Viewed on 13 June 2018)
- 14 EDWARDS, Michael. Prospects for land, rent and housing in UK cities. [on-line]. Working paper. London: Government Office for Science, Foresight, 2015, 55 p. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/440527/15-28-land-rent-housing-uk-cities.pdf. (Viewed on 11 June 2018)
- 15 BARRETT, S/DILKE, T. Strength in Numbers: Funding and Building More Affordable Housing in London. [on-line]. Policy report. London: Centre for London, 2017, 71 p. Available at: https://www.centreforlondon.org/wp-content/uploads/2017/03/CFUJ5181_strength_in_numbers_policy_report_0217_WEB.pdf. (Viewed on 12 June 2018)
- 16 Ibid.
- 17 A draft version of the "London Plan", a strategic plan for the development of Greater London, signed by the Mayor of London and published by the Greater London Authority. The first London Plan was published on 10 February 2004 and was revised in 2004, 2008 and 2011. The current London Plan, published in 2016, was amended in January 2017 and will remain in force until 2036.
- 18 BOLEAT, Marc. The Housing Problem in London – a broken planning system. [on-line]. Research paper. London: The Housing & Finance Institute, 2017, 29 p. Available at: <http://thehfi.com/downloads/housingproblemindon.pdf>. (Viewed on 14 June 2018)
- 19 Disused land.
- 20 PUGH, T/SEAGER, J. Wasted Space to Living Place – Using surplus public land for housing in London. London: London First, 2015, 16 p.
- 21 Ibid.
- 22 Ibid.
- 23 In the United Kingdom, the county council is a non-metropolitan council in charge of education, transportation and social services. In London, these councils are given the honorary title of boroughs.
- 24 Ibid.
- 25 Ibid.
- 26 Home Truths – 12 steps to solving London's housing crisis. London: London first, 2014, 38 p.
- 27 The Mayor of London defines the Greater London development strategy through the "London Plan". The Mayor is always consulted for planning permission applications of strategic importance (i.e., in practice, applications for projects involving at least 150 housing units).
- 28 Ibid.
- 29 Ibid.
- 30 CHESHIRE, Paul. Are they Green *Belts* by Accident? In: LSE Spatial Economics Research Centre. [on-line]. Published on 22 May 2015. <http://spatial-economics.blogspot.com/2015/05/are-they-green-belts-by-accident.html>. (Viewed on 5 June 2018)
- 31 Ibid.
- 32 Ibid.
- 33 Ibid.
- 34 Ibid.
- 35 Ibid.
- 36 PAPWORTH, Tom. The Green Noose: An analysis of green belts and proposals for reform. [on-line]. Research report. London: The Adam Smith Institute, 2015, 64 p. Available at: <https://static1.squarespace.com/static/56edde762cd9413e151ac92/t/56f71c957c65e4881f6e395/1459035287095/The-Green-Noose1.pdf>. (Viewed on 12 June 2018)
- 37 Ibid.
- 38 CHESHIRE, Paul. Are they Green *Belts* by Accident? In: LSE Spatial Economics Research Centre. [on-line]. Published on 22 May 2015. <http://spatial-economics.blogspot.com/2015/05/are-they-green-belts-by-accident.html>. (Viewed on 05/06/2018)
- 39 CHESHIRE, P/SEAGER, J/STRINGER, B. The Green Belt: A place for Londoners? [on-line]. London: London First, 2015. Available at: <http://londonfirst.co.uk/wp-content/uploads/2015/02/Green-Belt-Report-February-2015.pdf>. (Viewed on 6 June 2018)
- 40 Ibid.
- 41 Ibid.
- 42 Ibid.
- 43 Ibid.
- 44 Ibid.
- 45 Ibid.
- 46 PAPWORTH, Tom. The Green Noose: An analysis of green belts and proposals for reform. [on-line]. Research report. London: The Adam Smith Institute, 2015, 64 p. Available at: <https://static1.squarespace.com/static/56edde762cd9413e151ac92/t/56f71c957c65e4881f6e395/1459035287095/The-Green-Noose1.pdf>. (Viewed on 12 June 2018)
- 47 BLANC, Fanny. Draft London Plan consultation LSE London Response. In: LSE London Housing. [on-line]. Published on 24 mars 2018. <http://londonhousing.org/2018/03/draft-london-plan-consultation-lse-london-response/>. (Viewed on 14 June 2018)
- 48 PAPWORTH, Tom. The Green Noose: An analysis of green belts and proposals for reform. [on-line]. Research report. London: The Adam Smith Institute, 2015, 64 p. Available at: <https://static1.squarespace.com/static/56edde762cd9413e151ac92/t/56f71c957c65e4881f6e395/1459035287095/The-Green-Noose1.pdf>. (Viewed on 12 June 2018)
- 49 MURPHY, Luke. To create housing for the many not the few, we should reform Britain's land market. In: CityMetric. [on-line]. Published on 23 April 2018. <https://www.citymetric.com/politics/create-housing-many-not-few-we-should-reform-britain-s-land-market-3855>. (Viewed on 14 June 2018)
- 50 STEINMETZ, Hélène. Les politiques du logement en Europe : comparaisons. Cahiers français, 2015, n°338, p. 8-14.
- 51 BOLEAT, Marc. The Housing Problem in London – a broken planning system. [on-line]. Research paper. London: The Housing & Finance Institute, 2017, 29 p. Available at: <http://thehfi.com/downloads/housingproblemindon.pdf>. (Viewed on 14 June 2018)
- 52 Ibid.
- 53 EDWARDS, Michael. Prospects for land, rent and housing in UK cities. [on-line]. Working paper. London: Government Office for Science, Foresight, 2015, 55 p. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/440527/15-28-land-rent-housing-uk-cities.pdf. (Viewed on 11 June 2018)
- 54 BOLEAT, Marc. The Housing Problem in London – a broken planning system. [on-line]. Research paper. London: The Housing & Finance Institute, 2017, 29 p. Available at: <http://thehfi.com/downloads/housingproblemindon.pdf>. (Viewed on 14 June 2018)
- 55 HOLMAN, N./FERNANDEZ-ARRIGOTIA, M./SCANLON, K/WHITEHEAD, C. Housing in London: Addressing the Supply Crisis. [on-line]. London: LSE Knowledge

Transfer: Higher Education Innovation Fund, 2015, 20 p. Available at: http://eprints.lse.ac.uk/64158/1/Fernandez_Arrigoitia_Housing_in_London.pdf. (Viewed on 7 June 2018)

56 BOLEAT, Marc. The Housing Problem in London – a broken planning system. [on-line]. Research paper. London: The Housing & Finance Institute, 2017, 29 p. Available at: <http://thehfi.com/downloads/housingproblemindondon.pdf>. (Viewed on 14 June 2018)

57 EDWARDS, Michael. Prospects for land, rent and housing in UK cities. [on-line]. Working paper. London: Government Office for Science, Foresight, 2015, 55 p. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/440527/15-28-land-rent-housing-uk-cities.pdf. (Viewed on 11 June 2018)

58 HILL, Dave. London Housing Crisis: Tackling Landbanking. In: The Guardian. [on-line]. Published on 2 March 2014. <https://www.theguardian.com/uk-news/davehillblog/2014/mar/02/london-housing-crisis-landbanking>. (Viewed on 11 June 2018)

59 Ibid.

60 HOLMAN, N./FERNANDEZ-ARRIGOITIA, M./SCANLON, K./WHITEHEAD, C. Housing in London: Addressing the Supply Crisis. [on-line]. London: LSE Knowledge Transfer: Higher Education Innovation Fund, 2015, 20 p. Available at: http://eprints.lse.ac.uk/64158/1/Fernandez_Arrigoitia_Housing_in_London.pdf. (Viewed on 7 June 2018)

61 BARRETT, S./DILKE, T. Strength in Numbers: Funding and Building More Affordable Housing in London. [on-line]. Research paper. London: Centre for London, 2017, 71 p. Available at: https://www.centreforlondon.org/wp-content/uploads/2017/03/CFUJ5181_strength_in_numbers_policy_report_0217_WEB.pdf. (Viewed on 12 June 2018)

62 Ibid.

63 Ibid.

64 BOSETTI, N./BROWN, R. Fiscal Devolution and Reform to Strengthen London. In: Centre for London. [on-line]. Published on 13 July 2017. <https://www.centreforlondon.org/reader/open-city-london-after-brexits-fiscal-devolution-and-reform-to-strengthen-london/#council-tax-reform>. (Viewed on 6 June 2018)

65 MURPHY, L./SNELLING, C./STIRLING, A. A Poor Tax – Council Tax in London: Time for Reform. [on-line]. London: Institute for Public Policy Research, 2018, 60 p. Available at: <https://www.ippr.org/files/2018-03/a-poor-tax-council-tax-in-london.pdf>. (Viewed on 13 June 2018)

66 Ibid.

67 Ibid.

68 Ibid.

69 Ibid.

70 Ibid.

71 Ibid.

72 Ibid.

73 Ibid.

74 Ibid.

75 Ibid.

76 Estimate based on 1991 prices.

77 Ibid.

78 The Institute for Public Policy Research (IPPR) gives the example of a Band A home, with an estimated value of £40,000 in 1991 and which would have paid a council tax rate of £275 in 1993, while a Band H home, with a value of £320,001 would have paid £824. The same Band A house, now valued at £209,600, would pay an average council tax rate of £689 in 2015/2016 (i.e. 0.33% of its value), compared to £2,037 for the Band H property currently valued at £1,676,800, which represents a council tax rate of only 0.12% of the property's value.

79 Ibid.

80 Ibid.

81 In London, each borough.

82 Ibid.

83 The Institute for Public Policy Research (IPPR) gives the example of a Band H property (the highest band), located in Westminster, valued at £10 million, which would pay £1,345 in council tax, i.e. less than a Band C property located in Harrow with a value of £240,000, which would have paid £1,359 in 2015/2016.

84 Ibid.

85 Ibid.

86 WINGHAM, Mark. Council Tax in London – A publication for the London Finance Commission. [on-line]. Working paper. London: GLA Economics, 2017, 100 p. Available at: <https://www.london.gov.uk/sites/default/files/council-tax-in-london-wp-80.pdf>. (Viewed on 14 June 2018)

87 Ibid.

88 Ibid.

89 MURPHY, L./SNELLING, C./STIRLING, A. A Poor Tax – Council Tax in London: Time for Reform. [on-line]. London: Institute for Public Policy Research, 2018, 60 p. Available at: <https://www.ippr.org/files/2018-03/a-poor-tax-council-tax-in-london.pdf>. (Viewed on 13 June 2018)

90 WINGHAM, Mark. Council Tax in London – A publication for the London Finance Commission. [on-line]. Working paper. London: GLA Economics, 2017, 100 p. Available

at: <https://www.london.gov.uk/sites/default/files/council-tax-in-london-wp-80.pdf>. (Viewed on 14 June 2018)

91 Ibid.

92 Ibid.

93 BOSETTI, N./BROWN, R. Fiscal Devolution and Reform to Strengthen London. In: Centre for London. [on-line]. Published on 13 July 2017. <https://www.centreforlondon.org/reader/open-city-london-after-brexits-fiscal-devolution-and-reform-to-strengthen-london/#council-tax-reform>. (Viewed on 6 June 2018)

94 Ibid.

Paris

1 Atelier parisien d'urbanisme. Population, logement, emploi – Partie 1 : la population. [on-line] (amended in October 2016). Available at: <https://www.apur.org/fr/nos-travaux/population-logement-emploi-partie-1-population>. (Viewed on 10 July 2018)

2 INSEE – Institut national de la statistique et des études économiques. Comparateur de territoire – Département de Paris (75). [on-line] (amended on 26 June 2018). Available at: <https://www.insee.fr/fr/statistiques/1405599?geo=DEP-75>. (Viewed on 13 July 2018)

3 Bundesrat. Organisation > Federal States. [on-line]. Available at: <https://www.bundesrat.de/EN/organisation-en/laender-en/laender-en-node.html>; Paris [on-line]. In: Encyclopédie Larousse. Tomaison. Paris: Larousse, 2018. Available at: <http://www.larousse.fr/encyclopedie/ville/Paris/137068>. (Viewed on 29 June 2018)

4 MADEC, Pierre. Le marché immobilier parisien : quelles spécificités ? Cahiers français, 2015, n°338, p. 52-56.

5 Ibid.

6 Ibid.

7 Ibid.

8 Institut national de la statistique et des études économiques. Comparateur de territoire – Département de Paris (75). [on-line] (amended on 26 June 2018). Available at: <https://www.insee.fr/fr/statistiques/1405599?geo=DEP-75>. (Viewed on 13 July 2018)

9 DELL'ORO, Jean-Louis. Prix de l'immobilier : un marché à deux vitesses entre Paris et la banlieue. In: Challenges [on-line]. (Published on 22 February 2018.) Available at: https://www.challenges.fr/immobilier/actu-immo/immobilier-les-prix-flambent-a-paris-et-les-ecarts-se-creusent-avec-l-ile-de-france_569282. (Viewed on 11 July 2018)

10 MADEC, Pierre. Le marché immobilier parisien : quelles spécificités ? Cahiers français, 2015, n°338, p. 52-56.

11 Ibid.

12 Observatoire des Loyers de l'Agglomération Parisienne. Évolution en 2016 des loyers d'habitation du secteur locatif privé dans l'agglomération parisienne [on-line]. Paris: OLAP, 2017, 28 p. Available at: http://www.observatoire-des-loyers.fr/sites/default/files/olap_documents/rapports/_loyers/Rapport%20Paris%202017-V2.pdf. (Viewed on 12 July 2018)

13 MADEC, Pierre. Le marché immobilier parisien : quelles spécificités ? Cahiers français, 2015, n°338, p. 52-56.

14 Ibid.

15 MOHRT, François. Le parc de bureaux parisien et son potentiel de transformation [on-line]. Paris: Atelier parisien d'urbanisme, 2015, 16 p. Available at: https://www.apur.org/sites/default/files/documents/parc_bureaux_parisien_potentiel_transformation.pdf. (Viewed on 13 July 2018)

16 Ibid.

17 Ibid.

18 Ibid.

19 Ibid.

20 TREGUIER, Éric. Comment la transformation de bureaux en logements pourrait s'imposer. In: Challenges [on-line]. (Published on 9 April 2018.) Available at: https://www.challenges.fr/entreprise/vie-de-bureau/comment-la-transformation-de-bureaux-en-logements-pourrait-s-imposer_579115. (Viewed on 13 July 2018)

21 HORNY, Gérard. Transformer des bureaux en logements ? Plus facile à dire qu'à faire. In: Slate FR [on-line]. (Published on 21 March 2014.) Available at: <http://www.slate.fr/story/84681/transformer-des-bureaux-en-logements>. (Viewed on 11 July 2018)

22 Paris : deux mesures pour transformer des bureaux en logements. In: Batiweb [on-line]. (Published on 12 February 2016.) Available at: <http://www.batiweb.com/actualites/legislation-et-reglements/paris-deux-mesures-pour-transformer-des-bureaux-en-logements-12-02-2016-27833.html>. (Viewed on 12 July 2018)

23 DOREL, V./L'HÉNAFF, F./MOHRT, F./VIROT, P. La transformation de bureaux en logements à Paris de 2001 à 2012 [on-line]. Paris: Atelier parisien d'urbanisme, 2014, 70 p. Available at: <https://www.apur.org/fr/nos-travaux/transformation-bureaux-logements-paris-2001-2012#>. (Viewed on 10 July 2018)

24 La transformation de bureaux en logements encouragée à Paris. In: Le Parisien [on-line]. (Published on 9 February 2016.) Available at: <http://www.leparisien.fr/paris-75/la-transformation-de-bureaux-en-logements-encouragee-a-paris-09-02-2016-5529491.php>. (Viewed on 10 July 2018)

25 MOHRT, François. Le parc de bureaux parisien et son potentiel de transformation [on-line]. Paris: Atelier parisien d'urbanisme, 2015, 16 p. Available at: https://www.apur.org/sites/default/files/documents/parc_bureaux_parisien_potentiel_transformation.pdf.

- pdf. (Viewed on 13 July 2018)
- 26 Ibid.
- 27 ESCUDIÉ, Jean-Noël. Habitat – Paris adopte deux mesures pour favoriser la transformation de bureaux en logements. In: Banque des territoires [on-line]. (Published on 17 February 2016.) Available at: <https://www.caissesdesdepotsdesterritoires.fr/cs/ContentServer?pagename=Territoires/LOActu/ArticleActualite&cid=1250270307030>. (Viewed on 13 July 2018)
- 28 Ibid.
- 29 HORNY, Gérard. Transformer des bureaux en logements ? Plus facile à dire qu'à faire. In: Slate FR [on-line]. (Published on 21 March 2014.) Available at: <http://www.slate.fr/story/84681/transformer-des-bureaux-en-logements>. (Viewed on 11 July 2018)
- 30 TREGUIER, Éric. Comment la transformation de bureaux en logements pourrait s'imposer. In: Challenges [on-line]. (Published on 9 April 2018.) Available at: https://www.challenges.fr/entreprise/vie-de-bureau/comment-la-transformation-de-bureaux-en-logements-pourrait-s-imposer_579115 (Viewed on 13 July 2018)
- 31 MORHT, F/VIROT, P. Transformation de bureaux en logements à Paris [on-line]. Paris: Atelier parisien d'urbanisme, 2013, 8 p. Available at: http://www.drihl.ile-de-france.developpement-durable.gouv.fr/IMG/pdf/transmutations_bureaux_logements_cle015f13.pdf. (Viewed on 10 July 2018)
- 32 Ibid.
- 33 TREGUIER, Éric. Comment la transformation de bureaux en logements pourrait s'imposer. In: Challenges [on-line]. (Published on 9 April 2018.) Available at: https://www.challenges.fr/entreprise/vie-de-bureau/comment-la-transformation-de-bureaux-en-logements-pourrait-s-imposer_579115 (Viewed on 13 July 2018)
- 34 MÉTIVIER, Alexandre. Paris : quand le logement social devient modulable. In: Le Parisien [on-line]. (Published on 19 October 2016.) Available at: <http://www.leparisien.fr/paris-75014/paris-quand-le-logement-social-devient-modulable-19-10-2016-6228384.php>. (Viewed on 10 July 2018)
- 35 POUTHIER, Adrien. Pourquoi les prix du foncier et des logements neufs ne risquent pas de baisser. In: Le Monde [on-line]. (Published on 13 May 2016.) Available at: <https://www.lemoniteur.fr/article/pourquoi-les-prix-du-foncier-et-des-logements-neufs-ne-riquent-pas-de-baisser:1185059> (Viewed on 12 July 2018)
- 36 Mairie de Paris. Surélever son immeuble [on-line]. Paris: Mairie de Paris, 2016, 16 p. Available at: <https://api-site.paris.fr/images/85422>. (Viewed on 11 July 2018)
- 37 Ibid.
- 38 La surélévation à Paris : mode d'emploi. In: Architectes Paris [on-line]. Published on 30 September 2015. <http://www.architectes-paris.info/la-surelevation-a-paris-mode-demploi/>. (Viewed on 12 July 2018)
- 39 GAMBRELLE, Jean-Marie. Pour une approche quantitative de la politique du logement : l'exemple de l'agglomération parisienne. In: Politique du logement – analyses et débat [on-line]. Published on 15 February 2016. <http://politiquedulogement.com/2016/02/pour-une-approche-quantitative-de-la-politique-du-logement-lexemple-de-lagglomeration-parisienne/>. (Viewed on 12 July 2018)
- 40 Le logement en Île-de-France, une « bombe à retardement ». Paris: SEURA, 2013, 121 p.
- 41 MADEC, Pierre. Le marché immobilier parisien : quelles spécificités ? Cahiers français, 2015, n°338, p. 52-56.
- 42 Habiter le Grand Paris / AIGP 2 / saison 1, Le logement en Île-de-France, une « bombe à retardement », SEURA team, March 2013
- 43 TRANNOY, Alain. Politiques du logement : éléments de diagnostic et propositions. In: Politique du logement – analyses et débat [on-line]. Published on 14 September 2017. <http://politiquedulogement.com/2017/09/politiques-du-logement-elements-de-diagnostic-et-propositions/>. (Viewed on 11 July 2018)
- ## Berlin
- 1 50% of these costs can also be written off on taxes each year.
- 2 BALÉO, Marie. European Cities and the Refugee Situation: A Laboratory for Affordable Housing and Urban Resilience to Future Crises. Paris: La Fabrique de la Cité, 2018, 86 p. Available at: https://www.lafabriquedelacite.com/wp-content/uploads/2018/09/Fabrique_refugies_WEB_VA-BD.pdf (Viewed on 28 June 2018)
- 3 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.
- 4 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 5 Ibid.
- 6 Ibid.
- 7 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. International Journal of Housing Policy, 2017. DOI: 10.1080/19491247.2017.1278581
- 8 Ibid.
- 9 Ibid.
- 10 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 11 Berlin Strategy. Urban Development Concept Berlin 2030. Berlin: Senate Department for Urban Development and the Environment, 2015, p. 78. Available at: http://www.stadtentwicklung.berlin.de/planen/stadtentwicklungskonzept/download/strategie/BerlinStrategie_Broschuere_en.pdf. (Viewed on 29 June 2018)
- 12 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. International Journal of Housing Policy, 2017. DOI: 10.1080/19491247.2017.1278581
- 13 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.
- 14 Ibid.
- 15 Ibid.
- 16 CEIC. Germany GDP per Capita: Berlin. [on-line]. Available at: <https://www.ceicdata.com/en/germany/esa-2010-gdp-per-capita-by-region/gdp-per-capita-berlin>. (Viewed on 29 June 2018)
- 17 CEIC. Germany GDP per Capita: Hamburg. [on-line]. Available at: <https://www.ceicdata.com/en/germany/esa-2010-gdp-per-capita-by-region/gdp-per-capita-hamburg>. (Viewed on 29 June 2018)
- 18 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.
- 19 Ibid.
- 20 GRANATH HANSSON, Anna. City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg. International Journal of Housing Policy, 2017. DOI: 10.1080/19491247.2017.1278581
- 21 In Germany, cold rent is defined as rent that does not include the cost of hot water, heating and electricity.
- 22 Ibid.
- 23 Ibid.
- 24 Bundesrat. Organisation > Federal States. [on-line]. Available at: <https://www.bundesrat.de/EN/organisation-en/laender-en/laender-en-node.html>; Paris [on-line]. In: Encyclopédie Larousse. Tomaison. Paris: Larousse, 2018. Available at: <http://www.larousse.fr/encyclopedie/ville/Paris/137068>. (Viewed on 29 June 2018)
- 25 Berlin Strategy. Urban Development Concept Berlin 2030. Berlin: Senate Department for Urban Development and the Environment, 2015, p. 78. Available at: http://www.stadtentwicklung.berlin.de/planen/stadtentwicklungskonzept/download/strategie/BerlinStrategie_Broschuere_en.pdf. (Viewed on 29 June 2018)
- 26 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 27 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 28 BALÉO, Marie. European Cities and the Refugee Situation: A Laboratory for Affordable Housing and Urban Resilience to Future Crises. Paris: La Fabrique de la Cité, 2018, 86 p. Available at: https://www.lafabriquedelacite.com/wp-content/uploads/2018/09/Fabrique_refugies_WEB_VA-BD.pdf. (Viewed on 28 June 2018)
- 29 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 30 Berlin, like Hamburg and Bremen, has the specific characteristic of being a city-state. Authority is shared between the Federal State, the Land of Berlin and the districts rather than municipalities.
- 31 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 32 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.
- 33 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.
- 34 LEICHEVALIER HURARD, Lucie. Le marché au cœur de la politique allemande du logement. In: DPH [on-line]. Published on-line in 2008. <http://base.d-p-h.info/fr/fiches/dph/fiche-dph-7682.html>. (Viewed on 2 July 2018)
- 35 KOFNER, Stefan. Social Housing in Germany: An Inevitably Shrinking Sector? Critical Housing Analysis [on-line]. 2017, vol. 4, n°1, p. 61-71. Available at: <http://www.housing-critical.com/home-page-1/social-housing-in-germany-an-inevitably-shrinki>. (Viewed on 29 June 2018)
- 36 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 37 STEINMETZ, Hélène. Les politiques du logement en Europe : comparaisons. Cahiers français, 2015, n°338, p. 8-14.
- 38 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 39 Ibid.
- 40 KOFNER, Stefan. Social Housing in Germany: An Inevitably Shrinking Sector? Critical Housing Analysis [on-line]. 2017, vol. 4, n°1, p. 61-71. Available at: <http://www.housing-critical.com/home-page-1/social-housing-in-germany-an-inevitably-shrinki>. (Viewed on 29 June 2018)
- 41 Ibid.
- 42 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.
- 43 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.
- 44 KOFNER, Stefan. Social Housing in Germany: An Inevitably Shrinking Sector? Critical

In search of affordable housing: a European challenge

Housing Analysis [on-line]. 2017, vol. 4, n°1, p. 61-71. Available at: <http://www.housing-critical.com/home-page-1/social-housing-in-germany-an-inevitably-shrinki>. (Viewed on 29 June 2018).

45 Ibid.

46 Source: document sent to the author by the Senatsverwaltung für Stadtentwicklung und Wohnen.

47 Ibid.

48 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.

49 SCANLON, K/MULLINS, D. Cohousing in Berlin: What's Different? Part Two. In: Collaborative housing and community resilience – ESRC Funded Seminar Series [on-line]. Published on 30 April 2015. <https://collaborativehousing.net/2015/04/30/cohousing-in-berlin-whats-different-part-two/>. (Viewed on 29 June 2018)

50 SCANLON, K/MULLINS, D. Cohousing in Berlin: What's Different? In: Collaborative housing and community resilience – ESRC Funded Seminar Series [on-line]. Published on 23 April 2015. <https://collaborativehousing.net/2015/04/28/cohousing-in-berlin-whats-different/>. (Viewed on 29 June 2018)

51 LAFOND, M./TSVETKOVA, L. CoHousing Inclusive – Selbstorganisiertes, gemeinschaftliches Wohnen für alle. Berlin: jovis, 2017, 240 p.

52 VORMS, Bernard. Le modèle allemand de régulation des loyers est-il transposable en France ? In: Métropolitiques.eu [on-line]. Published on 2 April 2012. https://www.metropolitiques.eu/spip.php?page=print&id_article=310. (Viewed on 2 July 2018)

53 STIMPEL, Roland (ed.). Housing Market Report Berlin 2018 – Berlin Hyp & CBRE. Berlin: CBRE GmbH, 2018, 172 p.

Warsaw

1 LAWTON, Julie. Warsaw Rebuilt: Incorporating Affordable Housing by Design. *Studia Iuridica* [on-line]. 2015, vol. LXIII, 13 p. Available at: https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2839526_code1892983.pdf?abstractid=2690439&mirid=1. (Viewed on 16 July 2018)

2 DAVIES, Christian. 'They stole the soul of the city': how Warsaw's reprivatisation is causing chaos. In: *The Guardian* [on-line]. (Published on 18 December 2017.) Available at: <https://www.theguardian.com/cities/2017/dec/18/stole-city-soul-warsaw-reprivatisation-chaos> (Viewed on 16 July 2018)

3 TASAN, Tuna. Warsaw under transformation: new tendencies in the housing market. *GeoJournal* [on-line]. 1999, n°49, p. 91-103. Available at: <https://link.springer.com/article/10.1023/A:1007037619915> (Viewed on 18 July 2018)

4 LAWTON, Julie. Warsaw Rebuilt: Incorporating Affordable Housing by Design. *Studia Iuridica* [on-line]. 2015, vol. LXIII, 13 p. Available at: https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2839526_code1892983.pdf?abstractid=2690439&mirid=1. (Viewed on 16 July 2018)

5 Ibid.

6 Ibid.

7 Ibid.

8 Ibid.

9 Ibid.

10 TASAN, Tuna. Warsaw under transformation: new tendencies in the housing market. *GeoJournal* [on-line]. 1999, n°49, p. 91-103. Available at: <https://link.springer.com/article/10.1023/A:1007037619915> (Viewed on 18 July 2018)

11 Ibid.

12 Ibid.

13 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

14 DREMSEK, A./PRAMMER-WALDHÖR, M./STÄDTNER, K./WAGNER-PINTER, M. Housing and Housing Policies in 14 Large European Cities - Results of a comparative monitoring system. *Housing and Housing Policies in Large Cities*. [on-line]. 2011, 30 p. Available at: <http://www.wohnbauforschung.at/index.php?inc=download&id=5762> (Viewed on 17 July 2018)

15 Ibid.

16 Ibid.

17 TASAN, Tuna. Warsaw under transformation: new tendencies in the housing market. *GeoJournal* [on-line]. 1999, n°49, p. 91-103. Available at: <https://link.springer.com/article/10.1023/A:1007037619915> (Viewed on 18 July 2018)

18 Ibid.

19 Ibid.

20 Ibid.

21 DAVIES, Christian. 'They stole the soul of the city': how Warsaw's reprivatisation is causing chaos. In: *The Guardian* [on-line]. (Published on 18 December 2017.) Available at: <https://www.theguardian.com/cities/2017/dec/18/stole-city-soul-warsaw-reprivatisation-chaos> (Viewed on 16 July 2018)

22 Ibid.

23 Poland's reclaimed properties create scars across Warsaw. In: *The Financial*

Times [on-line]. (Published on 24 April 2018.) Available at: <https://www.ft.com/content/3f1f6972-430c-11e8-93cf-67ac3a6482fd> (Viewed on 18 July 2018)

24 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

25 Ibid.

26 TWARDUCH, A./HECIAK, J. Affordable housing in Poland – the study of a non-existent sector [on-line]. Zurich: ETH Zürich, 9 p. Available at: https://www.ethz.ch/content/dam/ethz/special-interest/conference-websites-dam/no-cost-housing-dam/documents/TwarduchHeciak_final.pdf. (Viewed on 17 July 2018)

27 In 2016, the Polish State implemented, for example, "Home Plus", a programme in favour of affordable housing, the main aim of which is again to encourage owner-occupation, to the detriment of rentals. The programme aims to provide inexpensive public land to lower the cost of purchasing a property for families. These owner-occupier families then have 25 years to reimburse the property's construction price.

28 Ibid.

29 HARAN, L./KALDI, M. Le parc de logements – Fiche d'analyse de l'observatoire des territoires [on-line]. Paris: Commissariat général à l'égalité des territoires, 2017, 22 p. Available at: http://www.observatoire-des-territoires.gouv.fr/observatoire-des-territoires/sites/default/files/Fiche-OT-le%20parc%20de%20logements_0.pdf (Viewed on 18 July 2018)

30 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

31 Ibid.

32 Ibid.

33 DREMSEK, A./PRAMMER-WALDHÖR, M./STÄDTNER, K./WAGNER-PINTER, M. Housing and Housing Policies in 14 Large European Cities - Results of a comparative monitoring system. *Housing and Housing Policies in Large Cities*. [on-line]. 2011, 30 p. Available at: <http://www.wohnbauforschung.at/index.php?inc=download&id=5762> (Viewed on 17 July 2018)

34 <http://www.um.warszawa.pl/en/Highlights/flats-warsaw-residents-plans-upcoming-years>

35 Currently, very few households in Warsaw have taken out such a loan.

36 Defined by ENS Lyon as a "process of renewal of a district's social and demographic composition to the benefit of wealthier households".

37 KORCELLI-OLEJNICZAK, E./BIERZYŃSKI, A./DWORZĄŃSKI, P./GROCHOWSKI, M./PIOTROWSKI, F./WĘCŁAWOWICZ, G. DIVERCITIES - Dealing with Urban Diversity: The Case of Warsaw [on-line]. DIVERCITIES, 2017, 178 p. Available at: <https://www.urbandivercities.eu/wp-content/uploads/2017/02/Divercities-City-Book-Warsaw.pdf>. (Viewed on 18 July 2018)

38 Ibid.

39 Ibid.

40 ERBEL, Joanna. Housing affordable for everyone. New housing policy for 2030. Zurich: ETH Zürich, 8 p. (Viewed on 23 July 2018)

41 MANTEY, Dorotea. Council and social housing in Poland. *Global Tenant* [on-line]. 2017, p.8. Available at: <http://www.iut.nu/wp-content/uploads/2017/03/Council-and-Social-Housing-in-Poland.pdf> (Viewed on 16 July 2018)

42 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

43 Ibid.

44 Ibid.

45 ERBEL, Joanna. Housing affordable for everyone. New housing policy for 2030. Zurich: ETH Zürich, 8 p. (Viewed on 23 July 2018)

46 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

47 <http://www.um.warszawa.pl/en/Highlights/flats-warsaw-residents-plans-upcoming-years>

48 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

49 MANTEY, Dorotea. Council and social housing in Poland. *Global Tenant* [on-line]. 2017, p.8. Available at: <http://www.iut.nu/wp-content/uploads/2017/03/Council-and-Social-Housing-in-Poland.pdf> (Viewed on 16 July 2018)

50 Resolution No. LIX/1534/2017 of the Warsaw Municipal Council dated 14 December 2017 on the adoption of the "Housing 2030" housing policy for the city of Warsaw.

51 ERBEL, Joanna. Housing affordable for everyone. New housing policy for 2030. Zurich: ETH Zürich, 8 p. (Viewed on 23 July 2018)

Munich

- 1 On almost every indicator, Germany's south is doing better than its north. In: The Economist [on-line]. (Published on 20 August 2017.) Available at: <https://www.economist.com/kaffeeklatsch/2017/08/20/on-almost-every-indicator-germanys-south-is-doing-better-than-its-north> (Viewed on 19 July 2018)
- 2 MÖBERT, Jochen. The German housing market in 2018 – Price and rent outlook for Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart [on-line]. Frankfurt: Deutsche Bank Research, 2018, 11 p. Available at: https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD000000000460528/The_German_housing_market_in_2018.pdf (Viewed on 20 July 2018)
- 3 Ibid.
- 4 BÜTTNER, B./THIERSTEIN, A./ZHAO, J./FÖRSTER, A. When growth stresses development. Interdependencies between housing, employment and mobility in the Munich metropolitan region [on-line]. 2014, 21 p. Available at: https://www.researchgate.net/profile/Benjamin_Buettner/publication/273633319_When_growth_stresses_development_Interdependencies_between_housing_employment_and_mobility_in_the_Munich_metropolitan_region/links/5541eccc0cf2aba1e4f121cc/When-growth-stresses-development-Interdependencies-between-housing-employment-and-mobility-in-the-Munich-metropolitan-region.pdf?origin=publication_detail
- 5 Munich Annual Economic Report 2017 [on-line]. Munich: Landeshauptstadt München, Referat für Arbeit und Wirtschaft, 2017, 16 p. Available at: http://www.wirtschaft-muenchen.de/publikationen/pdfs/aer17_summary.pdf (Viewed on 19 July 2018)
- 6 Germany, France, The Netherlands - Housing markets in perspective 2016 [on-line]. Hoevelaken: BPD, 2016, 148 p. Available at: https://www.bpdeurope.com/media/107467/q540_bpd_dunefra-2016_engels-lr-web.pdf (Viewed on 19 July 2018)
- 7 MÖBERT, Jochen. The German housing market in 2018 – Price and rent outlook for Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart [on-line]. Frankfurt: Deutsche Bank Research, 2018, 11 p. Available at: https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD000000000460528/The_German_housing_market_in_2018.pdf (Viewed on 20 July 2018)
- 8 Munich Annual Economic Report 2017 [on-line]. Munich: Landeshauptstadt München, Referat für Arbeit und Wirtschaft, 2017, 16 p. Available at: http://www.wirtschaft-muenchen.de/publikationen/pdfs/aer17_summary.pdf (Viewed on 19 July 2018)
- 9 http://www.lscgrowthcommission.org.uk/wp-content/uploads/2016/06/CASE_STUDY_-_GREATER_MUNICH.pdf
- 10 https://www.bpdeurope.com/media/107467/q540_bpd_dunefra-2016_engels-lr-web.pdf
- 11 MÖBERT, Jochen. The German housing market in 2018 – Price and rent outlook for Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart [on-line]. Frankfurt: Deutsche Bank Research, 2018, 11 p. Available at: https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD000000000460528/The_German_housing_market_in_2018.pdf (Viewed on 20 July 2018)
- 12 MÖBERT, Jochen. The German housing market in 2018 – Price and rent outlook for Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart [on-line]. Frankfurt: Deutsche Bank Research, 2018, 11 p. Available at: https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD000000000460528/The_German_housing_market_in_2018.pdf (Viewed on 20 July 2018)
- 13 Ibid.
- 14 Germany, France, The Netherlands - Housing markets in perspective 2016 [on-line]. Hoevelaken: BPD, 2016, 148 p. Available at: https://www.bpdeurope.com/media/107467/q540_bpd_dunefra-2016_engels-lr-web.pdf (Viewed on 19 July 2018)
- 15 GAMBRELLE, Jean-Marie. Allemagne : le retour de la crise du logement. In: Politique du logement – analyses et débat [on-line]. Published on 1 July 2016. <http://politiquedulogement.com/2016/07/allemanne-le-retour-de-la-crise-du-logement/>. (Viewed on 20 July 2018)
- 16 Germany, France, The Netherlands - Housing markets in perspective 2016 [on-line]. Hoevelaken: BPD, 2016, 148 p. Available at: https://www.bpdeurope.com/media/107467/q540_bpd_dunefra-2016_engels-lr-web.pdf (Viewed on 19 July 2018)
- 17 STERZER, Lena. Does competition in the housing market cause transport poverty? Interrelations of residential location. European Transport Research Review [on-line]. 2017, vol. 9, n°3, p. 45. Available at: https://www.researchgate.net/publication/319043209_Does_competition_in_the_housing_market_cause_transport_poverty_Interrelations_of_residential_location_choice_and_mobility (Viewed on 19 July 2018)
- 18 GAMBRELLE, Jean-Marie. Allemagne : le retour de la crise du logement. In: Politique du logement – analyses et débat [on-line]. Published on 1 July 2016. <http://politiquedulogement.com/2016/07/allemanne-le-retour-de-la-crise-du-logement/>. (Viewed on 20 July 2018)
- 19 MÖBERT, Jochen. The German housing market in 2018 – Price and rent outlook for Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart [on-line]. Frankfurt: Deutsche Bank Research, 2018, 11 p. Available at: https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD000000000460528/The_German_housing_market_in_2018.pdf (Viewed on 20 July 2018)
- 20 Work Report 17/18, City of Munich Department of Urban Planning
- 21 The total budget allocated by the municipality to the construction of housing for the 2016–2020 period is €1.572 million (source: Munich city council).
- 22 Work Report 17/18, City of Munich Department of Urban Planning
- 23 DROSTE, C./LELEVRIER, C./WASSENBERG, F. Urban Regeneration in European social housing areas. In: SCANLON, K./WHITEHEAD, C. Social Housing in Europe II: A review of policies and outcomes. LSE, London School of Economics. London: LSE, London School of Economics, 2008.
- 24 Ibid.
- 25 GAMBRELLE, Jean-Marie. Allemagne : le retour de la crise du logement. In: Politique du logement – analyses et débat [on-line]. Published on 1 July 2016. <http://politiquedulogement.com/2016/07/allemanne-le-retour-de-la-crise-du-logement/>. (Viewed on 20 July 2018)
- 26 WULFHORST, G./KLUG, S. Sustainable Mobility in Metropolitan Regions. VS Verlag für Sozialwissenschaften, 2016, 224 p.
- 27 The ratio of income is the ratio between total expenses related to the primary home and the household's income (source: INSEE – French national institute for statistics and economic research). For tenants, these expenses include the payment of rent and charges in addition to housing tax. For homeowners, they include the repayment of a mortgage taken out to purchase the housing and the payment of condominium fees and land and housing taxes.
- 28 Ibid.
- 29 MAZZELLA, Tony. Prioritizing Public Transit for Speed, Reliability, and Rider Satisfaction [on-line]. Washington: The German Marshall Fund of the United States, 2013, 23 p. Available at: <http://www.gmfus.org/file/2971/download>. (Viewed on 20 July 2018)
- 30 <https://link.springer.com/article/10.1007/s12544-017-0259-3>
- 31 MAZZELLA, Tony. Prioritizing Public Transit for Speed, Reliability, and Rider Satisfaction [on-line]. Washington: The German Marshall Fund of the United States, 2013, 23 p. Available at: <http://www.gmfus.org/file/2971/download>. (Viewed on 20 July 2018)
- 32 Ibid.
- 33 Ibid.
- 34 STERZER, Lena. Does competition in the housing market cause transport poverty? Interrelations of residential location. European Transport Research Review [on-line]. 2017, vol. 9, n°3, p. 45. Available at: https://www.researchgate.net/publication/319043209_Does_competition_in_the_housing_market_cause_transport_poverty_Interrelations_of_residential_location_choice_and_mobility (Viewed on 19 July 2018)
- 35 BÜTTNER, B./THIERSTEIN, A./ZHAO, J./FÖRSTER, A. When growth stresses development. Interdependencies between housing, employment and mobility in the Munich metropolitan region [on-line]. 2014, 21 p. Available at: https://www.researchgate.net/profile/Benjamin_Buettner/publication/273633319_When_growth_stresses_development_Interdependencies_between_housing_employment_and_mobility_in_the_Munich_metropolitan_region/links/5541eccc0cf2aba1e4f121cc/When-growth-stresses-development-Interdependencies-between-housing-employment-and-mobility-in-the-Munich-metropolitan-region.pdf?origin=publication_detail (Viewed on 20 July 2018)
- 36 KINGARDNER, J./BENTLAGE, M./WENNER, F./BÜTTNER, B./KLUG, S./THIERSTEIN, A./WULFHORST, G. No longer monocentric, not yet polycentric. On changes of spatial structure and mobility in the Munich Metropolitan Region. [on-line]. 2015, 17 p. Available at: <https://mediatum.ub.tum.de/doc/1277827/1277827.pdf>. (Viewed on 20 July 2018)
- 37 CADUS, Sebastian. A Housing and Mobility Cost Calculator for the Province of Salzburg. [on-line] Applied geoinformatics. Salzburg: University of Salzburg, 2013, 109 pages. Available at: https://ispace.researchstudio.at/sites/ispace.researchstudio.at/files/masterthesis_cadus.pdf. (Viewed on 20 July 2018)
- 38 KINGARDNER, J./BENTLAGE, M./WENNER, F./BÜTTNER, B./KLUG, S./THIERSTEIN, A./WULFHORST, G. Future Perspectives for the Munich Metropolitan Region – an Integrated Mobility Approach. Transportation Research Procedia [on-line]. 2016, vol. 19, p. 94–108. Available at: <https://www.sciencedirect.com/science/article/pii/S2352146516308572>. (Viewed on 19 July 2018)
- 39 BÜTTNER, B./THIERSTEIN, A./ZHAO, J./FÖRSTER, A. When growth stresses development. Interdependencies between housing, employment and mobility in the Munich metropolitan region [on-line]. 2014, 21 p. Available at: https://www.researchgate.net/profile/Benjamin_Buettner/publication/273633319_When_growth_stresses_development_Interdependencies_between_housing_employment_and_mobility_in_the_Munich_metropolitan_region/links/5541eccc0cf2aba1e4f121cc/When-growth-stresses-development-Interdependencies-between-housing-employment-and-mobility-in-the-Munich-metropolitan-region.pdf?origin=publication_detail (Viewed on 20 July 2018)
- 40 International Association of Public Transport. Assessing the benefits of public transport [on-line]. Brussels: UITP, 2009, 6 p. Available at: <http://www.uitp.org/sites/>

default/files/cck-focus-papers-files/01%20Assessing%20the%20benefits%20of%20public%20transport.pdf (Viewed on 19 July 2018)

41 Ibid.

42 CLARK, G./MOONEN, T. Munich: A globally fluent metropolitan economy [on-line]. Global Cities Initiative: A Joint Project of Brookings and JPMorgan Chase, 2014, 34 p. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/GCI_Munich.pdf (Viewed on 20 July 2018)

43 KINIGARDNER, J./BENTLAGE, M./WENNER, F./BÜTTNER, B./KLUG, S./THIERSTEIN, A./WULFHORST, G. Future Perspectives for the Munich Metropolitan Region – an Integrated Mobility Approach. Transportation Research Procedia [on-line]. 2016, vol. 19, p. 94–108. Available at: <https://www.sciencedirect.com/science/article/pii/S2352146516308572>. (Viewed on 19 July 2018)

44 CLARK, G./MOONEN, T. Munich: A globally fluent metropolitan economy [on-line]. Global Cities Initiative: A Joint Project of Brookings and JPMorgan Chase, 2014, 34 p. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/GCI_Munich.pdf (Viewed on 20 July 2018)

45 BÜTTNER, B./THIERSTEIN, A./ZHAO, J./FÖRSTER, A. When growth stresses development. Interdependencies between housing, employment and mobility in the Munich metropolitan region [on-line]. 2014, 21 p. Available at: https://www.researchgate.net/profile/Benjamin_Buettner/publication/273633319_When_growth_stresses_development_Interdependencies_between_housing_employment_and_mobility_in_the_Munich_metropolitan_region/links/5541eccc0cf2aba1e4f121cc/When-growth-stresses-development-Interdependencies-between-housing-employment-and-mobility-in-the-Munich-metropolitan-region.pdf?origin=publication_detail. (Viewed on 20 July 2018)

46 Metropolregion München. Standort für Investoren, Gründer, Fachkräfte. [on-line]. 2017. Available at: https://www.metropolregion-muenchen.eu/uploads/pics/emm2017_01.pdf (Viewed on 20 July 2018)

48 BÜTTNER, B./KINIGADNER, J./JI, C./WULFHORST, B. The TUM Accessibility Atlas: Visualizing Spatial and Socioeconomic Disparities in Accessibility to Support Regional Land-Use and Transport Planning. Networks and Spatial Economics [on-line]. 2018, 30 p. Available at: https://www.researchgate.net/publication/322253942_The_TUM_Accessibility_Atlas_Visualizing_Spatial_and_Socioeconomic_Disparities_in_Accessibility_to_Support_Regional_Land-Use_and_Transport_Planning/fulltext/5a4e5e340f7e9b234d9d178c/322253942_The_TUM_Accessibility_Atlas_Visualizing_Spatial_and_Socioeconomic_Disparities_in_Accessibility_to_Support_Regional_Land-Use_and_Transport_Planning.pdf?origin=publication_detail. (Viewed on 19 July 2018)

49 Growth Commission. Corridors and tech regions: International case studies – Munich. [on-line]. 2016, 14 p. Available at: http://www.lscgcommission.org.uk/wp-content/uploads/2016/06/CASE_STUDY_-_GREATER_MUNICH.pdf (Viewed on 19 July 2018)

50 KINIGARDNER, J./BENTLAGE, M./WENNER, F./BÜTTNER, B./KLUG, S./THIERSTEIN, A./WULFHORST, G. No longer monocentric, not yet polycentric. On changes of spatial structure and mobility in the Munich Metropolitan Region. [on-line]. 2015, 17 p. Available at: <https://mediatum.ub.tum.de/doc/1277827/1277827.pdf>. (Viewed on 20 July 2018)

51 BÜTTNER, B./KINIGADNER, J./JI, C./WULFHORST, B. The TUM Accessibility Atlas: Visualizing Spatial and Socioeconomic Disparities in Accessibility to Support Regional Land-Use and Transport Planning. Networks and Spatial Economics [on-line]. 2018, 30 p. Available at: https://www.researchgate.net/publication/322253942_The_TUM_Accessibility_Atlas_Visualizing_Spatial_and_Socioeconomic_Disparities_in_Accessibility_to_Support_Regional_Land-Use_and_Transport_Planning/fulltext/5a4e5e340f7e9b234d9d178c/322253942_The_TUM_Accessibility_Atlas_Visualizing_Spatial_and_Socioeconomic_Disparities_in_Accessibility_to_Support_Regional_Land-Use_and_Transport_Planning.pdf?origin=publication_detail. (Viewed on 19 July 2018)

52 REISS-SCHMIDT, Stefan. European Metropolitan Regions in Transformation: Sustainable Development Strategies – the Munich case. [on-line]. 2010, 45 p. Available at: http://www.euskadi.eus/contenidos/informacion/2010ponencias_euskalhiria/es_ponencia/adjuntos/stephan_reiss_smith.pdf. (Viewed on 20 July 2018)

53 Metropolregion München. Standort für Investoren, Gründer, Fachkräfte. [on-line]. 2017. Available at: https://www.metropolregion-muenchen.eu/uploads/pics/emm2017_01.pdf (Viewed on 20 July 2018)

55 City of Munich, Department of Urban Planning and Building Regulation. Munich: Future Perspective – Strategies, Guidelines, Projects – Magazine updating the Perspective Munich report – City Council Resolution of 5 June 2013. [on-line]. 2013. Available at: https://www.muenchen.de/rathaus/dam/jcr:87edb82b-3219-4c92-af85-849722e2bd7a/Perspektive%20Flyer_web_englisch_RZ.pdf. (Viewed on 20 July 2018)

56 Ibid.

57 Area south-west of Munich.

58 City of Munich, Department of Urban Planning. Work Report 17/18. [on-line]. 2013. Available at: https://www.muenchen.de/rathaus/dam/jcr:a4133074-5032-46af-a411-532d41191754/LHM_Planungsreferat_WB17_ENG_WEB.pdf. (Viewed on 20 July

2018)

59 Agence d'urbanisme de Lyon. Cahier de la gouvernance : Métropole de Munich. Draft version. [on-line]. 2013. Available at: http://www.urbalyon.org/AffichePDF/Cahier_de_la_gouvernance_-_Metropole_de_Munich-24237 (Viewed on 20 July 2018)

60 CLARK, G./MOONEN, T. Munich: A globally fluent metropolitan economy [on-line]. Global Cities Initiative: A Joint Project of Brookings and JPMorgan Chase, 2014, 34 p. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/GCI_Munich.pdf. (Viewed on 20 July 2018)

61 Ibid.

62 City of Munich, Department of Urban Planning. Work Report 17/18. [on-line]. 2013. Available at: https://www.muenchen.de/rathaus/dam/jcr:a4133074-5032-46af-a411-532d41191754/LHM_Planungsreferat_WB17_ENG_WEB.pdf. (Viewed on 20 July 2018)

63 Ibid.

64 CLARK, G./MOONEN, T. Munich: A globally fluent metropolitan economy [on-line]. Global Cities Initiative: A Joint Project of Brookings and JPMorgan Chase, 2014, 34 p. Available at: https://www.brookings.edu/wp-content/uploads/2016/06/GCI_Munich.pdf. (Viewed on 20 July 2018)

65 Ibid.

Bordeaux

1 LANGLOIS, Corinne (dir). Comprendre la formation des prix pour produire du logement abordable [on-line]. Bordeaux: agence d'urbanisme Bordeaux métropole Aquitaine (a'urba), 2013, 8 p. Available at: https://www.aurba.org/wp-content/uploads/2014/02/Compr%C3%A9hension_formation_prix_logements.pdf. (Viewed on 11 June 2018)

2 RASSELET, Cécile (dir). Les loyers des agglomérations de Bordeaux et de La Teste-de-Buch - Arcachon [on-line]. Bordeaux: agence d'urbanisme Bordeaux métropole Aquitaine (a'urba), 2016, 40 p. Available at: https://www.aurba.org/wp-content/uploads/2016/09/Rapport_resultats_loyers2015_Bordeaux-Arcachon-LaTeste.pdf. (Viewed on 12 June 2018)

3 This is the case in particular of the “50,000 housing units around public transportation arteries” programme implemented by Bordeaux Métropole with a view to “producing housing that meets inhabitants’ needs at affordable prices ... close to existing or upcoming public transportation lines” .

4 And especially as from the housing policy reform of 1977.

5 LANGLOIS, Corinne (dir). Comprendre la formation des prix pour produire du logement abordable [on-line]. Bordeaux: agence d'urbanisme Bordeaux métropole Aquitaine (a'urba), 2013, 8 p. Available at: https://www.aurba.org/wp-content/uploads/2014/02/Compr%C3%A9hension_formation_prix_logements.pdf. (Viewed on 11 June 2018)

6 DÉJEAN, Jean-Philippe. Immobilier : à Bordeaux les promoteurs annoncent 40% de baisse sur le prix du foncier ! In: La Tribune [on-line]. (Published on 15 May 2018.) Available at: <https://objectifaquaine.latribune.fr/business/immobilier/2018-05-15/immobilier-a-bordeaux-les-promoteurs-annoncent-40-de-baisse-sur-le-prix-du-foncier-778489.html>. (Viewed on 14 June 2018)

7 Bordeaux Métropole. L'adhésion au futur établissement public foncier Nouvelle Aquitaine fait consensus. In: Bordeaux Métropole espace presse [on-line]. (Published on 26 January 2017.) Available at: <http://www.bordeaux-metropole.fr/Espace-presse/L-adhesion-au-futur-Etablissement-Public-Foncier-Nouvelle-Aquitaine-fait-consensus>. (Viewed on 10 June 2018)

8 French Law No. 2017-86 dated 27 January 2017 on equality and citizenship, article 102. Available at: <https://www.legifrance.gouv.fr/affichCodeArticle>.

9 DÉJEAN, Jean-Philippe. Immobilier : à Bordeaux les promoteurs annoncent 40% de baisse sur le prix du foncier ! In: La Tribune [on-line]. (Published on 15 May 2018.) Available at: <https://objectifaquaine.latribune.fr/business/immobilier/2018-05-15/immobilier-a-bordeaux-les-promoteurs-annoncent-40-de-baisse-sur-le-prix-du-foncier-778489.html>. (Viewed on 14 June 2018)

10 Ibid.

11 Ibid.

12 CÉSAR, Nicolas. Immobilier à Bordeaux : comment réguler les prix du foncier ? In: Sud Ouest [on-line]. (Published on 16 May 2018.) Available at: <https://www.sudouest.fr/2018/05/14/immobilier-bordeaux-metropole-et-promoteurs-innovent-pour-reguler-les-prix-du-foncier-5055664-4689.php> (Viewed on 13 July 2018)

13 DÉJEAN, Jean-Philippe. Immobilier : à Bordeaux les promoteurs annoncent 40% de baisse sur le prix du foncier ! In: La Tribune [on-line]. (Published on 15 May 2018.) Available at: <https://objectifaquaine.latribune.fr/business/immobilier/2018-05-15/immobilier-a-bordeaux-les-promoteurs-annoncent-40-de-baisse-sur-le-prix-du-foncier-778489.html>. (Viewed on 14 June 2018)

14 ‘Volumes capables’ housing may constitute collective housing (residential buildings), individual housing or terraced town houses, depending on whether or not they are located in an area under strain.

Credits

Stockholm

Figure 1 – Arvid Rudling, CC BY 2.0
Figure 3 – Frankie Fouganthin, CC BY-SA 4.0
Figure 4 – La Citta Vita, CC BY SA 2.0
Figure 5 – with permission from Jonas Högset
Figure 6 – Johan Fredriksson CC BY-SA 3.0

London

Figure 7 – *Contains: Map data © Google 2018, HM Land Registry data © Crown copyright and database right 2018. Price paid data is licensed under the Open Government Licence v3.0. Contains National Statistics data © Crown copyright and database right 2012, Ordnance Survey data © Crown copyright and database right 2012, Postal Boundaries © GeoLytx copyright and database right 2012, Royal Mail data © Royal Mail copyright and database right 2012.*
Figure 8 – Jorge Royan, CC BY-SA 3.0
Figure 9 – MatthiasKabel CC BY-SA 3.0
Figure 11 – Peter Fitzgerald CC BY SA 4.0
Figure 12 – Ian Capper, CC BY-SA 2.0
Figure 13 – Colin Smith CC BY-SA 2.0
Figure 14 – Hellerick CC BY-SA 3.0
Figure 15 – Nigel Cox CC BY-SA 2.0
Figure 16 – Marcus Cyron CC BY-SA 2.0
Figure 17 – James Bourne CC BY-SA 4.0

Paris

Figure 20 – Jean-Pierre Dalbéra, CC BY 2.0
Figure 21 – with permission from Canal Architecture ©
Figure 22 – with permission from Canal Architecture ©
Figure 23 – Hektor, CC BY-SA 3.0

Berlin

Figure 25 – Hunter Desportes, CC BY 2.0
Figure 26 – TUBS, CC BY-SA 3.0
Figure 27 – A.fiedler, CC BY-SA 3.0
Figure 29 – Bundesrat CC BY-NC-SA 2.0 Henning Schacht ©
Figure 30 – Aegaeon CC BY-SA 3.0
Figure 31 – © Ute Zscharnt, with permission from Michael LaFond

Warsaw

Figure 35 – David Stanek CC BY-NC-SA 2.0
Figure 36 – banasy CC BY-NC 2.0

Munich

Figure 38 – Roland Weegen CC BY-SA 3.0
Figure 39 – Maximilian Dörrbecker, CC BY-SA 2.5
Figure 40 – Paul Smith CC BY-NC-SA 2.0
Figure 41 – *Bundesamt für Bauwesen und Raumordnung (BBR)* CC BY-SA 3.0 DE

Bordeaux

Figure 44 – fdallay - CC BY 2.0.
Figure 45 – Didier CTP, CC BY-SA 3.0

La Fabrique de la Cité

La Fabrique de la Cité is a think tank dedicated to urban innovations and prospective. In an interdisciplinary approach, urban stakeholders, both French and international, gather to reflect on good practices of urban development and to suggest new ways to build and rebuild cities. Mobility, urban planning and construction, energy, the digital revolution, and new usages are the five axes that structure our work. Created by the VINCI group, its sponsor, in 2010, La Fabrique de la Cité is an endowment fund, and is thus vested with a public interest mission.

Author

Marie Baléo

Editor

Cécile Maisonneuve

Communications

Matthieu Lerondeau

Laure Blanchard

La Fabrique de la Cité
6, place du colonel Bourgoin
75012 Paris
France
contact@lafabriquedelacite.com



www.lafabriquedelacite.com



twitter.com/fabriquelacite