

Urban Maestro

New governance strategies
for Urban Design

Applying land value capture tools

lessons from Copenhagen and Freiburg

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INTRODUCTION

How can communities harness the value of land to build better places? The high cost of land is often blamed for the shortage of affordable housing and social infrastructure, including a lack of green space in new developments. As such, it can lead to mushrooming tower blocks in a few small areas and ugly urban sprawl on the edges of towns and cities. Yet some cities, notably in Northern Europe, have avoided the excesses of housing price inflation, congestion and pollution, and thereby kept land costs down. They have instead invested in making active travel and public transportation more attractive than an over-dependence on private cars. In doing so, they have used proactive planning and brokerage skills to build characterful new settlements that are well-connected to existing towns and cities.

This paper summarises the theory of Land Value Capture (LVC) and its role in funding local infrastructure, with a brief review of the Dutch experience with new settlements, before moving on to case studies involving innovative projects in Germany and Denmark in order to draw general conclusions on the best methods and techniques for controlling and tapping into land values. Further references and examples are set out in Nicholas Falk's policy paper for the Town and Country Planning Association (TCPA) with eleven recommendations for applying best practices in the UK.¹

¹ Nicholas Falk, Sharing the Uplift in Land Values: a Fairer System for Funding and Delivering Housing Growth, TCPA 2019, [www, UK2070.org.uk](http://www.UK2070.org.uk)

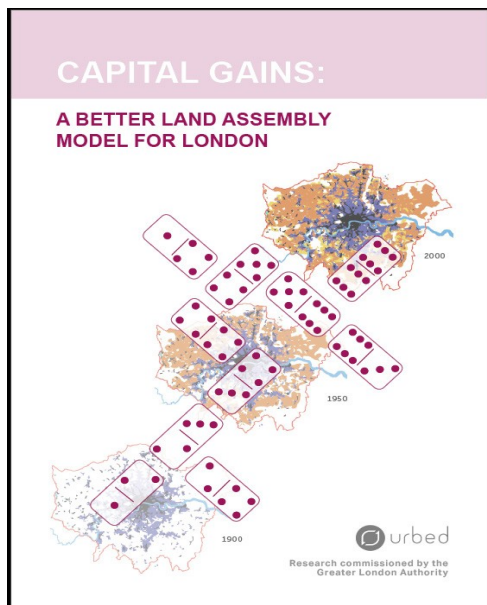
1. THE CASE FOR LAND VALUE CAPTURE (LVC)



The basic principle behind LVC is that property values are created by rising prosperity, accessibility, and planning consents. Hence, it is only fair that the community enjoys a share, especially when it is government that funds and provides the improved infrastructure. Unfortunately, fierce and expensive disputes can arise that lead to long delays and blight—what economists call ‘free riders’ wait for values to rise before making their land available. This led the Ebenezer Howard, the English pioneer of Garden Cities, to propose using the ‘*unearned increment*’ to fund infrastructure in planned new settlements that combined the best of town and country.² Land assembly would form the basis of Britain’s Post-war New Towns programme, and the eventual hundreds of smaller examples that have been developed all over the world.³

Some on the political right argue that property owners should be free to do as they please with their land. However, values depend on demand, which in turn is influenced by locational factors such as infrastructure, which can be either innate or publicly provided. The value of a plot of land is a *residual*, which is the difference between the value of whatever use is permitted and the costs of development. Furthermore, social justice necessitates a certain level of control over the environmental and social impacts of development. So, although there will be resistance to sharing the uplift in land values from those who benefit from the current system, urban sprawl and poor design are not in the long-term interest of their countries and therefore LVC does not conflict with basic human rights.

There are three main ways in which government can capture land values (apart from relying on death duties and other forms of general taxation). The first is to **tax developers or house builders**. This has been estimated to account for about 10-15% of development costs in the UK, perhaps half of uplift in all.⁴ The criticism from the private sector is that negotiations deter development, with complex viability tests and evasion. A second way, proposed in the *Future of Planning White Paper*, is an Infrastructural Levy on the value of completed developments, in order to **charge those who benefit after houses have been built**.⁵ This is similar to the US system



² Ebenezer Howard, *Garden Cities of Tomorrow*, 1902, Dodo Press

³ Robert Stern et al, *Paradise Planned: The Garden Suburb and the Modern City*, The Monacelli Press, 2013

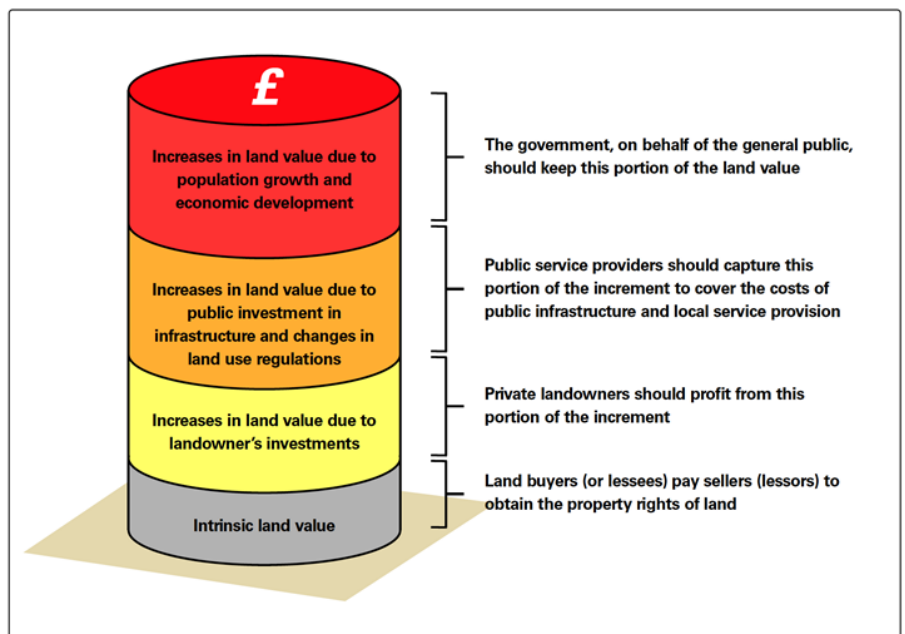
⁴ Tony Crook, *Capturing Increases in Land Value*, UK Collaborative Centre for Housing Evidence, 2020

⁵ *Planning for the Future*, 2020 www.gov.uk

of Tax Increment Finance, in which local authorities issue bonds based on the expected increase in property taxes after land is developed. A third, and possibly best, method is to **assemble the land** and take a share in the development. Our research report for the Greater London Authority used Dutch, German, French and US experiences on acquiring, incentivising and resourcing land assembly with case studies of exemplary projects.⁶

The images of the report covers show how London has grown like a game of dominoes—the highest land values (and hence potential for land value capture) can be found in locations on the edge of the capital city which are close to countryside yet accessible by adequate public transport. This trend was used to good effect in developing the railway lands at London's Kings Cross and the port and gas works area in the London Docklands developments. Furthermore, this is the method used by leading world cities such as Singapore, and which is widely used in France through what have been termed ZACs (Zone d'Amenagement Concerte), where publicly acquired land is coupled with investment in transport.

An excellent and freely available book from the World Bank Group examined different approaches to funding transport projects with a useful pillar diagram that depicts how increases in land value should be divvied up in order to achieve fairer and more effective outcomes.⁷ The researchers' preference was for land assembly as the best means of raising finance for transport infrastructure.



The costs of infrastructure should be recovered through land value capture¹

⁶ Capital Gains: A Better Land Assembly Model for London, URBED with Dentons and Gerald Eve, 2018
www.urbedtrust.com

⁷ H Suzuki et al, Financing Transit Oriented Development with Land Values, World Bank Group, 2015

Despite its appeal, such an approach can be controversial. At a meeting of researchers funded by the European Union entitled PUVACA held in Sarajevo in 2018 where convincing presentations were given by cities such as Munich and Bordeaux as well as from the UK, there was clear resistance to the idea from former members of the Communist bloc.⁸ This is because there, private property is now regarded as unassailable. Yet, it is in fact in everyone's best interest to have good, adequate infrastructure. As such, some form of capturing the inherent value of land should win general acceptance, provided the case is well designed and actively promoted, for example through attitude surveys and discussions in the media. Land Value Capture is currently the subject of a major international research project conducted by the OECD to produce a 'global compendium' of land value capture techniques, and given increasing demands and falling tax revenues, this topic is likely to be of increasing public interest.⁹

As well as influencing the affordability of housing and the provision of infrastructure, the cost of land can influence design in four main ways:

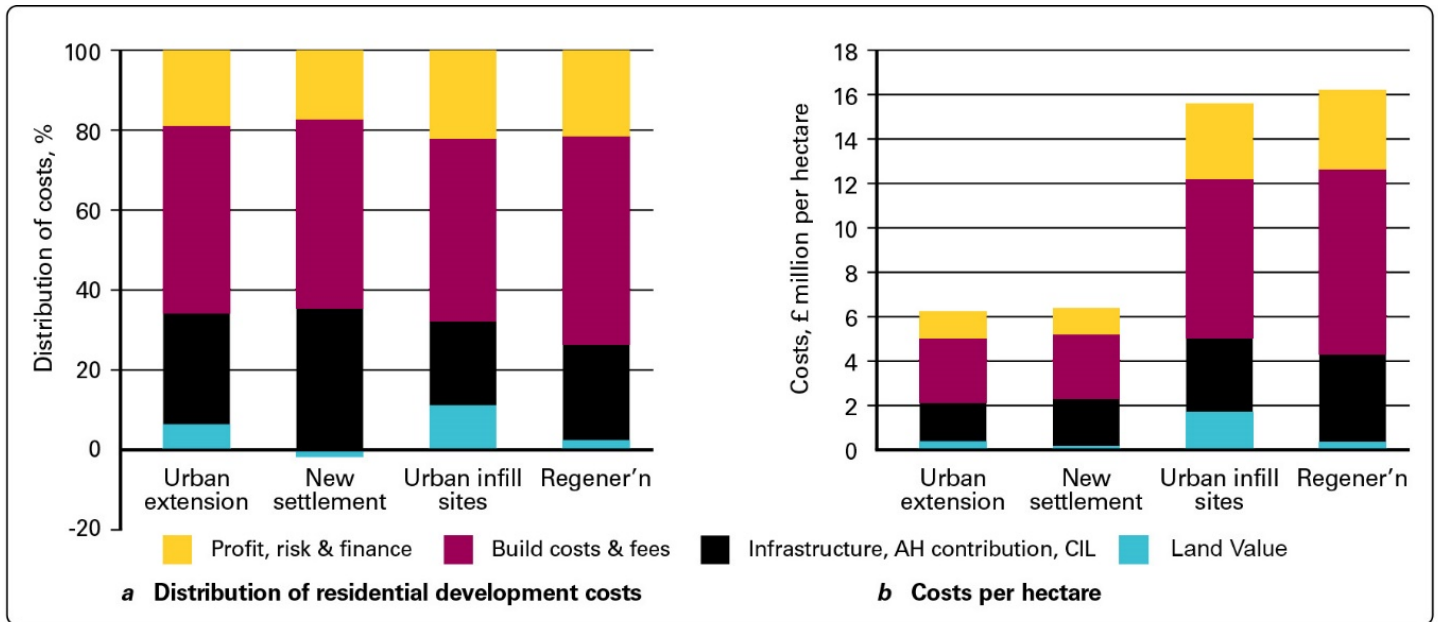
- Because land can represent such a high proportion of the cost of development (especially in high demand areas where developers compete for sites), quality and community benefits such as affordable housing may be sacrificed.
- Competition for sites may lead to concentrations or local monopolies. When only a few large developers control the supply, smaller builders or cooperatives find it hard to compete. Hence, both choice and the speed of development can suffer.
- Where housing price inflation is greatest and the supply of land is effectively monopolised, spatial inequalities will grow, alongside, for example, marked differences between different tenures and locations, which may ultimately lead to social conflict.
- Without adequate sources of local taxation, local authorities that lack the capacity to influence quality through land ownership tend to accept whatever is proposed. Even though poor quality may reduce long-term demand and hence economic growth, their powers of negotiation will be limited.

⁸ www.puvaca.eu (The Public Value Capture of Increasing Property Values)

⁹ Land Value Capture - OECD.org

2. THE CHALLENGE OF URBAN FINANCE

Before considering case studies, it helps to understand the impact land values have on development by drawing on the British experience. A common challenge for all cities is raising the financing necessary to meet demands for better transport, affordable housing, and more recent measures to tackle climate change. However, land and infrastructure can often cost as much as the construction of the houses on top of that land, particularly where new settlements are involved and there is a rapid rate of growth.¹⁰ The diagram depicts that, although the cost of land in greenfield sites can be lower, the profits from developing urban infill sites can be higher because the demand will be stronger and infrastructural costs can be shared. Incidentally, infrastructure can include green and blue open spaces, as well as social housing. The cost of land is often the only variable and as such should be the 'residual' or difference between the value of an approved scheme and the cost of delivering it.



In a rapidly growing historic university city such as Oxford, planning objectives or priorities may include supporting a knowledge-based economy, making housing more affordable, cutting/limiting unnecessary car use (and hence pollution), and reducing social divisions.¹¹ Planning policies will therefore seek to influence development and negotiate contributions. As earnings influence house prices and hence land values, there are issues of regional as well as local disparities and how

¹⁰ Source Pete Redman, Housing Futures for URBED

¹¹ Nicholas Falk, The Oxford Metro: Connectivity for a Smarter City, www.urbedtrust.org, 2020

far the burden should be borne by the young or the old, or shared between the house buyers and existing residents.

Taxes are always resisted, and often evaded. Hence eminent economists tend to agree that the 'least worst' taxes are those levied on wealth rather than on income, since they assist in the creation of fairer societies, accord with the principle of social justice, and avoid the *'corrosive effect of barristers and the limited ability of judges to appreciate, or even care about, the public interest.'*¹² Furthermore, charges on real estate, which are readily identified on maps or through aerial photography, are easier to recover than those on other sources of income which can be hidden or moved out of the country. If the proceeds from the charge are not frittered away on prestige projects or through corruption, it is possible to secure popular approval, for example by using bonds to fund new infrastructure using what in the US is called Tax Increment Finance (TIF).

Land value can then be captured from the expected increase in property taxes when development is successful. In North America, this is achieved through bonds raised by local authorities, where a vote is first taken on whether to issue a bond only after the viability of the project has been scrutinized, but before it has been offered up for subscription. To keep financing costs down, bonds need to be underpinned by land values, as both planning permission and the provision of infrastructure results in increased demand. In Europe, a similar role is played by state infrastructure banks such as Caisse des Depots in France, KfW in Germany and BNG in the Netherlands.

Here we concentrate on lessons learned from Northern Europe, with further case studies available in URBED's report for the Greater London Authority on land assembly.¹³ France, Germany and the Netherlands use spatial planning to locate major new developments where they can be coupled with infrastructural capacity, yet avoid areas of high agricultural value. In most of Northern Europe, to counter problems such as fragmented and problem sites, alongside sluggish owners or speculation, land for development is identified through a spatial planning process so that in long run it is public interest that prevails. Even in North America progressive cities such as Portland, Oregon promote intensification surrounding transit nodes as a means of containing urban growth rather than simply reacting to proposals from developers.

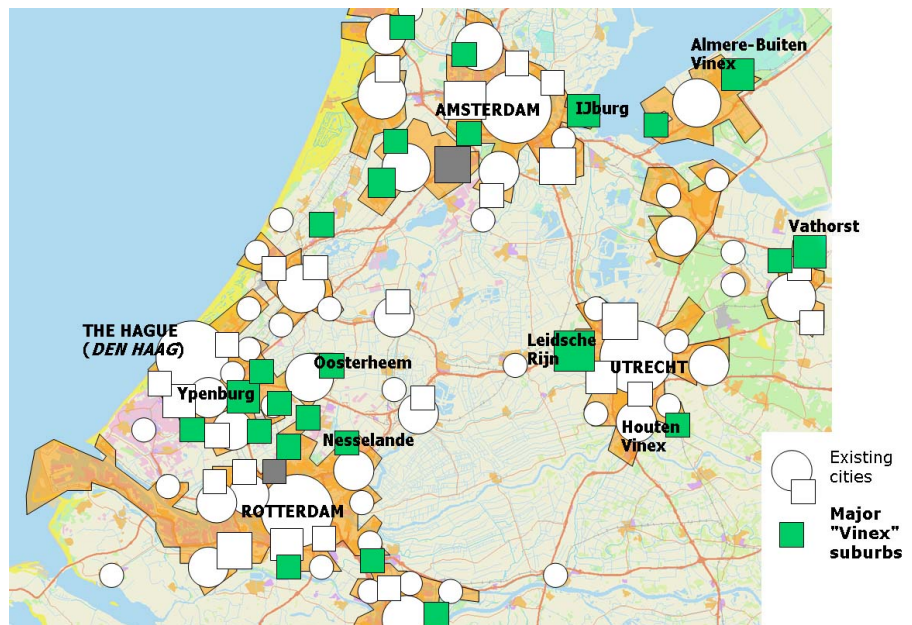
A particularly important model for securing quality design in new settlements can be found in the Netherlands. Case studies on the Dutch VINEX National Housing Plan, and on urban extensions in mid-sized towns such as Amersfoort or Houten, suggest

¹² E. g. Paul Collier, *The Future of Capitalism: facing the new anxieties*, Penguin, 2019

¹³ Nicholas Falk et al, *Capital Gains: a better land assembly model for London*, URBED Trust with Dentons and Gerald Eve, 2018 www.urbetrust.com

that the better results they have achieved do not stem from exceptional designers or charismatic politicians, but rather can be owed to a planning process that drives land values rather than merely responding to them.¹⁴ This process involves a more collaborative approach to development, using financial tools and community engagement, as well as more building regulations that achieve higher standards of local infrastructure, such as energy and transport systems.

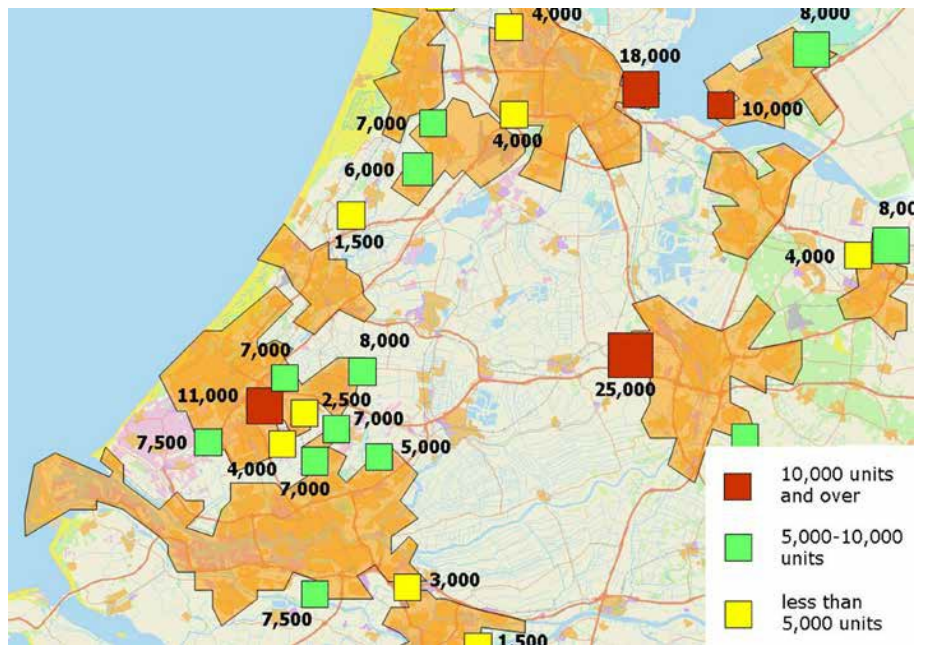
VINEX involved around a hundred urban extensions, which expanded the Dutch housing stock by 7.6% over a ten year period. The maps below depict how development took place around a 'green heart' on the edge of mid-sized towns and cities. Development was made viable through government support for land assembly and the availability of low cost financing from the Dutch state bank BNG for the installation of infrastructure.¹⁵ Dutch councils are able to transfer property rights to a public development agency under what is known as the **Building Rights** or First Choice model. The land is pooled and the original owners subsequently receive serviced land back in proportion to their original holding. While land value capture should be seen as just one of the tools required for quality growth, it is nevertheless a critical one.



VINEX settlements are built on the edge of towns and cities (source: Han Lorz)ing)

¹⁴ Peter Hall with Nicholas Falk, *Good Cities Better Lives: How Europe Discovered the Lost Art of Urbanism*, Routledge 2014

¹⁵ Nicholas Falk, *Funding Housing and Local Growth: How a British Investment Bank Could Help*, Smith Institute, 2014



Most new suburbs have included between 5-10,000 new homes (source: Han Lorzding)

3. LESSONS FROM GERMAN URBAN DEVELOPMENT MEASURES

Germany offers some of the best mechanisms for land value capture, using an ingenious method of land assembly for major housing schemes. The country's organisational and financial structure was substantially reformed following the Second World War to avoid a return to dictatorship or hyperinflation, and therefore measures were introduced that gave local authorities and state governments much more power over development through the principle of 'subsidiarity.' The consequences of this include housing costs that are lower and hence more affordable than in many other countries.

Germany, along with Switzerland, has some of the lowest rates of home ownership in Europe (around half), though many Germans invest instead in second homes. Instead of individuals relying on increases in the value of their house for their pensions, they are more likely to invest in business, for example through local savings banks (**Sparkassen**), not unlike the old mutual building societies in the UK.

Planning is controlled by democratically elected councils rather than left to the property owners or developers, who are required to conform to approved zoning plans and design principles, as the examples below from Freiburg illustrate. A review of social housing in Europe concludes that *'The German planning system is a mixture of plan and development-led approaches. It is characterised by hierarchical planning powers among the three levels of the government: the federal state (Bund), the local states (Länder) and the local municipalities (Gemeinde).'*¹⁶

Though Germany is a federal state, meaning that cities and regions have a greater degree of independence, local authorities follow a similar system in terms of prioritising the better use of *'poorly or under-used land.'* The German constitution, which was drawn up to prevent a return to dictatorship as mentioned previously, states that *'Property entails obligations. Its use should also serve the public good.'* Article 15 of the constitution further states that *'Land, natural resources and means of production may, for the purpose of socialisation, be transferred to public ownership or other forms of public enterprise by a law that determines the nature and extent of compensation.'*

As power rests with the municipality, public support is established before designation and land acquisition through a variety of forums. The master planner is typically selected following a competition in which the public can comment on or vote for their preferred scheme, and one of the short-listed designers must be selected to implement the plan. Because land values are 'frozen' after designation, there is less danger of speculation leading to an escalation of land values. This means that sales cannot be made at a higher price, and the local authority is effectively able to exercise Compulsory Purchase powers, (or what in the US is referred to as Eminent Domain, to convey the idea of a larger public purpose that prevails over private property rights).

Significant respect for human rights is enshrined in part of the constitution, called the **Basic Law**. As such it is the municipality, elected by the residents, that decides what land will be developed, not the property owners. The municipality not only decides what areas will be subject to the plans or **zoned**, but also specifies the **codes** or rules (as is being proposed in a government White Paper for the UK¹⁷). The German planning law, which is set out in the Building Codes (**Städtebauliche Entwicklungsmaßnahme 165-171**) not only allows for the speedy public assembly of under-used land, but also enables the municipality to recover the costs of land preparation.¹⁸ What is called **Unlegung** is a process for readjustment in which the municipality retains land equal to the increase in value subject to a cap of 30% on

¹⁶ Michael Oxley, The Future of Social Housing: learning from Europe, IPPR 2000

¹⁷ Planning for the Future, DHCLG, 2020

¹⁸ This information was provided by the legal department of the City of Freiburg thanks to help from the city's former director of development Wulf Daseking

greenfield land and 10% on inner city land. The municipality ‘pools’ the land and resells serviced sites to either the previous owners or small-scale developers, unless the landowner is able to undertake the agreed upon plan themselves and within a certain timeframe. The *Urban Maestro* paper on what is called ‘concept tendering’ lays out how the basic design principles are determined and set before bids are invited.¹⁹

Such a system enabled the City of Freiburg to develop the exemplary urban extensions of Vauban and Rieselfeld on the edges of the built-up area, linked to the rest of the urban area by extensions to the city’s tramways and possessing extensive greenery and community facilities such as shops and schools. Sites for housing were made available to building groups (**Baugruppen**), some 130 in all, which according to Wulf Daseking, the former development director, enabled a much greater diversity of designs and a more rapid rate of development to be achieved than relying on private developers.



Aerial view of Rieselfeld, Freiburg



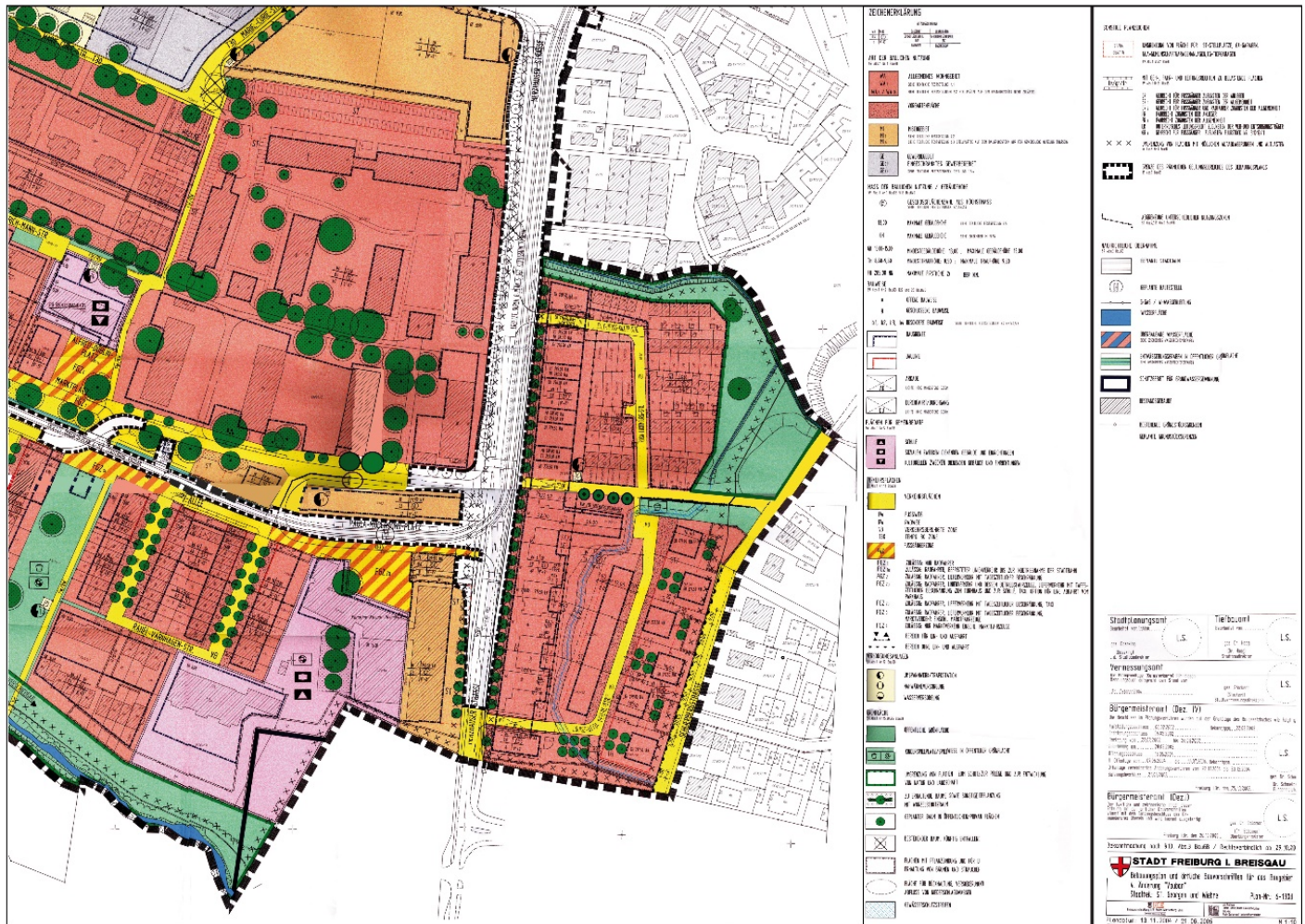
Housing built around courtyards in Rieselfeld

As Vauban had been used as a military site and barracks, the costs of the site’s reclamation were quite high. Development was undertaken by a group of green activists protesting against proposals for a nuclear power station. In the case of Rieselfeld, the main site was a former sewage works and water treatment plant, and housing has been developed in a manner resembling fishbone radiating from either side of a new tram line on the municipality’s initiative. The financing was gathered through a separate trust so that the municipality could recover its investment without any loss.

A notable feature in both schemes has been the provision of infrastructure, such as shops and schools as well as public transport, in advance of the housing, which make the new developments much more attractive to their new residents. Though the

¹⁹ <https://urbanmaestro.org/example/konzeptvergabe/>

developments are complex, the rules or codes in the Building Plan set out for Vauban can be listed on a single sheet of paper as the illustration shows.



Building Plan (Bau Plan) for Vauban where the basic design rules fit on one sheet of paper (Source: Wulf Daseking)

Freiburg has received groups of visitors from all over the world, and its model has been followed elsewhere. The design principles are set out in the *Freiburg Charter for Sustainable Development*, which a group from the Academy of Urbanism helped produce in 2012.²⁰ The most fundamental principle is the idea of a *City of Short Distances*, which involves confining new housing solely to extensions that are served by public transport. A similar system has also been used by the City of Frankfurt for an urban satellite of 6,000 units in Riedberg, which enabled the city to benefit from its investment in a metro. The city-owned development company there has also led the redevelopment of former industrial areas near the centre of the city at Rebenstock Park.

²⁰ <https://www.academyofurbanism.org.uk/freiburg-charter/>

Whilst quite different as places, our case studies of both Freiburg and Frankfurt demonstrate that both cities follow similar planning systems.²¹ Researchers, such as Ed Turner who is also a leading Councillor in Oxford City, believe that *'a stronger, more active role for the local state, in land assembly and in development, would lead to more extensive brownfield development'*.²² This does not mean that people are passive, and indeed rather than focusing on halting development, efforts are instead put toward receiving the rights envisioned in the basic principles. The result is much greater variety and quality than relying on commercial developers, who have no long term interest in the quality of what is built and may simply hang on to the land to wait for its value to rise.

It is always difficult to transfer lessons between countries because so much depends on the context, culture, and/or social values. One book on why the Germans seem to do better concludes that Germany's economic success largely stems from a spirit of collaboration or culture, mutual obligation and shared endeavour: *'...slowly but surely. That is the German way. The nosy obsession with rules can instantly antagonise... yet has provided protection against sudden lurches.'*²³

After a period when house price inflation was largely avoided, rents on new lets have recently escalated in leading cities such as Berlin through a surge in demand. This is despite innovative attempts to build more homes using cooperatives based on the Freiburg model. The experiences with unaffordable housing have led to fierce debates over land expropriation, and the shifts in Berlin's fortunes underscores not only the need to plan far in advance, but also the importance of hanging on to sufficient land under public ownership to ensure development is kept in balance and to allow for periods of slumps or recessions as well as booms.

In conclusion, Germany, along with most of Northern Europe, has succeeded in improving the quality of neighbourhood design through a more proactive approach to planning and development. This in turn reflects the greater value most people place on the common wealth and on collective efforts or soft power. This is opposed to the value placed on individualism in Anglo-Saxon countries, where planning tends to be more adversarial and legalistic. The prevailing culture or set of values also may explain higher levels of productivity, private investment, and consequently economic growth. The distinctive financial mechanisms have helped retain a strong private rental sector and limited the displacement and inequalities that can be found in many Anglo-Saxon societies.

²¹ Capital Gains: a better land assembly model for London, URBED for Greater London Authority, 2018
www.urbedtrust.com

²² Ed Turner, Developing brownfield land: Arguments for a more active local state, Journal of Building Survey, Appraisal and Valuation, volume 5, number 3, 2016

²³ John Kampfner, Why the Germans Do it Better: notes from a grown-up country, Atlantic Books 2020

4. LESSONS FROM DENMARK AND PUBLIC ASSET CORPORATIONS

Copenhagen offers a contrasting model of land assembly, which has also resulted in high quality and affordable housing. Denmark, like the UK, is relatively compact, densely populated and surrounded by water. However, lacking natural resources, its early inhabitants, the Vikings set off to conquer other countries, with much of Eastern England having been covered for centuries by the Danelaw, and paid taxes to their countrymen remaining back in Denmark. However, Denmark, like much of Scandinavia, retained an egalitarian and farm-based culture while building up a large empire, which by the Second World War it had lost. It further suffered from economic decline so that Copenhagen in the 1980s was a pale shadow of the imperial capital it had been.

Like Germany and the Netherlands, Denmark has sought to make the best use of its limited land, to create efficient industries, which employ highly skilled (and well-paid) people, and to plough wealth back into its towns and city centres. Notably, in the past it had redistributed land to farmers to create a more egalitarian society. Economic success has resulted from an emphasis on design and craftsmanship, as well as on making people feel comfortable through coffee, cakes and woolly sweaters (or ‘hygge’)!²⁴ More recently, the country has invested in measures to promote renewable sources of energy, which has created a successful new industrial sector. Copenhagen’s famous **Finger Plan** has concentrated development along transport corridors, with intensive agriculture situated in between.

Copenhagen is rated as one of the best cities in the world to live and work in by journals such as The Economist and Monocle. As is the case with Switzerland where housing demand is also very high, extensive use is made of cooperatives which make up 33% of households in Copenhagen, followed by 27% being private rent, 21% affordable rent, and only 19% owner occupied.²⁵ Having reversed decline, in 1992 the city and the Danish state set up a development corporation to take over former military land in Orestad, which is 7 minutes from the central railway station and 5 minutes from the airport. This linear town built along a new ‘finger’ has six stations on the city’s first metro line, which has been funded from the uplift in land values. The planning system is collaborative rather than adversarial, and the masterplan was developed by a Finnish firm with the project managed by a team from Danish railways. Orestad has spawned some amazing and sometimes overpowering examples of contemporary architecture, such as blocks of apartments integrated with a multi-storey car park, or housing that seems to soar over adjoining land. By limiting plots to between 120 and

²⁴ Helen Russell, The Year of Living Danishly: uncovering the secrets of the world’s happiest country, 2015

²⁵ Presentation by former City Architect for Copenhagen to the Academy of Urbanism Congress in September 2020

150 units, a great diversity of styles and uses has been achieved, with social housing being indistinguishable from owner occupied units.



Copenhagen's Metro was funded by land value uplift from the new town of Orestad



This block of housing was designed by the Danish firm of BIG architects

As well as contemporary design, another Danish innovation is the **Public Asset Corporation** (which is also used in Hamburg in Germany).²⁶ Copenhagen set up a

²⁶ Noring, L. (2019). Self-help for Cities. Land Journal , (January-February), 23-24.

company, now called *City and Port*, to pool all the publicly owned land in a partnership between the national and local government, with the municipality owning 51% of the company.²⁷ The company invests in the infrastructure necessary for sustainable development, and then sells off plots within a masterplan or development framework. This has the public purpose of funding infrastructure, so that land is sold for the best price and the surplus invested in public transport. One advantage is that the company retains its own freedom independent of political interference and shifts in policy, enabling it to weather property cycles and thereby create confidence in its plans.

A national law requires 25% of the housing to be affordable, of which a third in urban areas is social, and which is allocated and managed by the municipality. The cooperative tradition makes high density living attractive to young families. Co-housing, the principle of sharing some facilities including weekly meals, accounts for some 16% of housing nationally, and provides an attractive alternative to suburban life, especially in cities such as Copenhagen. Lower housing costs make it possible to spend more time with your family and to afford well-made products, thus boosting design and craftsmanship. The spirit of collaboration has extended to working with the neighbouring country of Sweden to build one of the longest bridges in the world over the Oresund, which has enabled people to live in one country and work in the other.

The company that developed Orestad went on to develop land that had been owned by the port, with a resulting partnership between the national and local governments having invested in the infrastructure needed for sustainable development, and then having sold off plots within a masterplan or development framework. By creating high density housing close to where jobs and services are located, the cost of living has been limited, which helps make Copenhagen one of the best cities to live in. The aforementioned cooperative tradition makes high density living attractive to young families. As also mentioned previously, a notable innovation has been the use of **Co-housing** in which groups of people share duties including eating together, which particularly appeals to elderly single people, but also parents with young children. Lower housing costs make it possible to spend more time with your family and to afford well-made products, thus boosting design and craftsmanship.

The principle of sharing land value uplift also applies to existing housing. For a hundred years, the Danes have distinguished between property taxes levied on the home and on the land it rests on, the latter of which goes to the government for

²⁷ Luise Noring has helped check the substance on land value capture, and more information is available in her web site <https://www.cityfinancelab.net/city-solutions-catalogue>

redistribution, while the former is retained by the local authority. The charge is proportional to their value (and is probably around three times higher than the equivalent Council Tax in the UK for a typical house). Thus, the tax rate on property and land values is 1.7% on average compared to the UK's 0.7%. Further research would be useful before firm conclusions can be drawn, but the Danish experience suggests that Land Value Rating or taxation is quite feasible as well as beneficial.

With relatively low land costs, more can be invested in the quality of the house and neighbourhood, so that much more use is made of renewable energy, especially through wind power, but also through higher standards of insulation such as triple-glazed windows. The development of Orestad with its iconic apartment blocks can shock English visitors due its contrast with neighbouring Copenhagen and relatively limited provision of cafes. Yet, as the capital is only a short train or bike ride away, surely it is better to design for the future rather than to try and replicate the past, and to fund rapid urban transit rather than rely on car-based sprawl?

As another example of how the system works, Denmark's 'second city' of Aarhus has a population of 330,000 with the municipality employing some 20,000 staff. The Council buys land for future growth on the edge of the city, and leases it back to the farmers until it is necessary for development, thus keeping land costs down. The *Expropriation* Law allows the state to acquire land in the public interest, such as for the construction of roads, schools and playing fields. The creative role of Aarhus is most evident in the way that housing and offices have been developed overlooking the harbour and along the route of the city's first tram line. The city has taken over the land from the port (which it already owned) at a negotiated price. It then drew up the masterplan and prepared the land so it could be developed as a series of parcels, benefitting from the views over the water. As well, the recently built tram lines are being extended further out to serve new settlements on the edge.

Taxes in Denmark are high, and the largest taxes are on income, which can take most of a person's salary. The municipality (like in Sweden) receives a share of the income tax paid by the people working in that municipality, and as such has a great incentive to ensure that the city prospers. Rates are split, with the larger half based on the amount of land used, and the smaller amount on the value of the buildings. This encourages good use of land, and there is less of a problem of developers or landowners sitting on land waiting for values to rise. It also supports a more collaborative approach to development, which is in line with Danish culture.

Land tax is payable to the local authority and county based on a thousandth of the land's value.²⁸ The tax first goes to the government, supplementing the income

²⁸ My informant was a city councillor in the Aarhus municipality

tax, which is then returned to the municipality based on a formula (like in Sweden). The result seems to be a much fairer society in which natural resources are used more carefully, with more rapid rates of development, and with much better social services in the towns and cities because the local authorities benefit from economic growth. However, problems are starting to arise as developers bid up the price of land, which is why land assembly a great deal ahead of development will be so important.

In summary, Danish cities reap the benefits from smarter urbanisation, and so can think at least 20-30 years ahead rather than worrying about the next government cuts. Furthermore, a high quality of life in an increasingly knowledge-based economy helps generate the kind of high paying jobs necessary to support a lifestyle that is leagues ahead of equivalent cities in the UK. Friendly groups of people help compensate for the cold and windy climate. With wider sources of funding, local authorities can employ a full range of experts, and hence secure higher standards of design, at least in the leading towns and cities. The success of Copenhagen in transitioning from a car-based society to one largely based on the bicycle and now a metro illustrates a more collective approach to solving common problems such as pollution and climate change. The use of a Public Asset Corporation to pool land secures collaboration within the public sector and enables a lead that can be given to the private sector who can then focus on building housing efficiently.

5. LESSONS FOR OTHER COUNTRIES

While land value capture in Germany and Denmark has been greatly assisted by their systems of governance, much of the success has been in large part due to a more collaborative culture. Informal tools are used to engage communities and win support for innovation, so there is much less opposition than in the UK. A substantial policy paper on Land Value Capture for the Town and Country Planning Association (TCPA) brings together a summary of the literature, a range of case studies, and eleven recommendations for sharing land value uplift, along with extensive references.²⁹ The conclusions have been reduced to three fundamental proposals in this paper, based on what has worked well in Germany and Denmark.

The case studies explain the mechanisms or tools that can be used and their connection with urban quality. There are three innovative approaches that can be

²⁹ Nicholas Falk, Sharing Land Value Uplift: a fairer system for funding and delivering housing growth, TCPA 2019
<http://www.urbedtrust.com/wp->

used to raise funding from development that avoids having to wait for owners to die or protracted negotiations with developers.

Land assembly Owning a large part of the land to be developed is by far the best way of securing both quality design and higher density development surrounding new transport infrastructure. This can be achieved in a limited manner through the pooling of public land, as is the case in Copenhagen. Alternatively, the local authority can exercise their right to take over land that will be developed before reselling it to developers and retaining the roads and other public facilities, which requires legislation. This can produce much better designed public realms, and therefore far less space is given over to roads and parking. The German system, which is administered through the Building Regulations, also provides greater opportunities for self-builders and cooperative groups, or individuals who want to build innovative housing for themselves. It does, however, rely on local authorities having the ambition and capacity to be proactive and having a source of low cost 'patient' capital to fund assembly and the provision of local infrastructure.

Infrastructure levy A second way is to charge developers when housing is ready for sale or occupied, as is under consideration in the UK. This can generate a larger fund and incentive for development, especially if the charge is hypothecated and allocated for infrastructure, including social housing. It is relatively easy to administer in countries where the value of a house must be registered when it is sold, instead of relying on hypothetical calculations. However, quality depends on the effectiveness of design codes, and these could be hard to specify and apply unless the local authority owns the land and employs the necessary skilled staff.

A warning should be taken from the USA where building codes are often used to keep property values high by restricting the minimum plot size and therefore the range of people who can acquire housing in a new development. Additionally, a levy on new development may be ineffectual where demand is low, and also, it does not recover any of the increase in value from neighbouring property owners who benefit from improved infrastructure. This leads to the problem that economists call 'free riders,' where owners hang on until values have risen, which can lead to properties decaying with a resulting loss of value even where property values are high.

Land Value Rating The third and most innovative way, which avoids penalising the occupants of new homes, is to raise a levy on all those who benefit from new or improved infrastructure, with higher rates on larger properties and exemptions where values are low. Economists have argued for the use of either property rates or taxes to achieve a fairer society in all senses of the term and as a better alternative to a tax on transactions. This requires the regular updating of rateable values, which should now be quite easy to do by making full use of GIS and aerial photography, as well as computerised registers of property ownership. This seems to have worked well in

Denmark and some parts of the USA, such as in the State of Pennsylvania. A similar system is being tested in the Australian capital of Canberra. However, to be effective and avoid pitfalls such as speculation, such changes need to be part of a wider reform of the manner in which planning is undertaken.

Eleven proposals for sharing the uplift from land values were put forward for the UK in a paper for the UK2070 Commission,³⁰ and in the subsequent Policy Paper published by the Town and Country Planning Association (TCPA).³¹ They drew on what has worked in the past as well as research into best practices around the world. The proposals were discussed in a high level seminar at the London School of Economics (LSE) along with a paper from Professor Paul Cheshire, and received broad support.³² The proposals were targeted at the UK but could equally apply to any country that wanted to make local communities more independent and self-reliant.

The general principle is to increase the level of investment in infrastructure, which would include affordable or social housing, but to distinguish between Growth Areas, where land values are high but development costs low, and Regeneration Areas, where values are low and reclamation costs are higher. A charge on the value of completed developments would enable existing levies, such as Section 106, to be dropped, and funds raised against the prospective yield from housing development. This would be achieved by enabling trusted bodies to raise private financing for projects that will be self-funding over the long-term while producing short-term social and environmental benefits that command local support. The national government could then concentrate on regenerating cities and major towns that have lost their economic base by redistributing the proceeds of national taxes, including increased charges on real estate.

6. CONCLUSIONS FOR POLICY

In summary, three main approaches to Land Value Capture can be distinguished:

1. Taxing developers to recover the costs of infrastructure

³⁰ <http://uk2070.org.uk/2019/02/19/dr-nicholas-falk-publishes-making-fairer-places-a-think-piece-on-land-values-to-uk2070-commission/>

³¹ Nicholas Falk, Sharing Land Value Uplift: a fairer system for funding and delivering housing growth, TCPA 2019 <http://uk2070.org.uk/wp-content/uploads/2019/09/LandValues.pdf>

³² See the discussion at <https://blogs.lse.ac.uk/lseelondon/reforming-land-value-capture-to-improve-our-cities/>

2. Charging those who benefit through a levy on the sale of new homes, as proposed in the UK, or a charge on all property owners, as practised in Denmark
3. Assembling land for major developments as in the former British colonies of Hong Kong and Singapore, in London's Kings Cross and Docklands, and in urban extensions in Germany, the Netherlands and Denmark

Experience in Germany, Denmark and other Northern European countries suggest replicable ways of going beyond planning to rebalance towns and cities and improve the quality of design. The case studies illustrate the importance of local leadership and a culture of entrepreneurial planners working over a number of decades to design and implement major schemes such as urban extensions. Analysing the ingredients of those success stories, the evidence demonstrates that land value capture mechanisms seem to work more effectively when the formal regulatory power allows the establishment of development frameworks, rather than having to respond to any proposal from a private landowner. However, there is also evidence that formal land value capture mechanisms work more effectively if combined with informal tools that engage the wider community in discussing the principles for development before the masterplans are commissioned. In this way, resistance to development can be largely overcome by soft powers of negotiation and persuasion. Moreover, by providing sites for cooperative groups and self-builders, a greater diversity of design is possible, and hence a more balanced community can be created.

The uncertain prospects due to the current coronavirus situation, climate change, economic depression, and political instability call for a different approach to development in order to rebuild local economies, create better places to live, and reduce environmental impacts. The power of GIS and information technology has enabled the consideration of a wider range of options in seeking to fulfil multiple objectives, which in turn should produce greater economic returns for all. The need to restore confidence and generate new sources of income for local government makes this a prudent time to apply the lessons on what works in building better, as well as more affordable, housing. As one can see, Land Value Capture has a crucial role to play not just in funding more affordable housing, but also in providing the infrastructure necessary to create better neighbourhoods.

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URBAN MAESTRO

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www.urbanmaestro.org

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