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1. Introduction

This NESC Secretariat paper on international approaches to housing, land use and urban development is one of two secretariat papers prepared in conjunction with a NESC report on *Urban Development land Urban Development Land, Housing and Infrastructure: Fixing Ireland's Broken System*. The other Secretariat paper is on *Land Value Capture and Urban Public Transport*.

Ireland's housing system is facing a crisis. While there are many aspects to this crisis, the issue of how to provide affordable rental and owner-occupied housing for a growing proportion of the population remains paramount. It is also accepted that Ireland needs to achieve a substantial and sustained increase in the level of investment in public transport, particularly in urban settings.

The effective availability of land for housing development in appropriate locations, in a way that is consistent with housing affordability, has long been an important policy issue in Ireland. The land issue is part of the boom-bust cycle in housing; borrowing for land, in expectation of higher land values, was central to the boom and subsequent collapse.

The servicing of land and the provision of infrastructure to support sustainable housing development is costly. On the other hand, the value of serviced building land supported by infrastructure will be a multiple of the value of agricultural land. This difference in value, when garnered appropriately, has the potential to pay for some or all of the costs of servicing the land and providing infrastructure. The supply of housing is often constrained by insufficient investment in infrastructure.

In seeking to identify how Ireland might address the twin policy challenges of housing supply and infrastructure funding, we have examined effective approaches to providing affordable housing and transport infrastructure internationally. These examples reflect the complexity of the challenge created by the combination of land, housing systems, planning, urban development, infrastructure and the building industry.

This paper describes international approaches to land use that have been relatively effective in addressing the challenges of housing and urban development. International experience of land value capture and investment in public transport is addressed in the other Secretariat paper, *Land Value Capture and Urban Public Transport*.

This paper begins with an outline of the approach to land management and housing development in the Netherlands (Section 2). The experience of how this worked in the post-war decades is described, along with more recent developments, including the VINEX plan for spatial development and housing. The next section describes German experience of housing and land management. The highly successful recent developments of urban extensions of Freiburg as well as Hafen City are discussed. Austria's housing system is examined in Section 4, with an emphasis on the role of land in supporting the limited-profit housing sector. The paper ends with a summary of successful international practices of potential relevance to Ireland.

2. Public Land Development in the Netherlands[1]

2.1 Introduction

The Netherlands is widely regarded as having an effective system of land-use planning that includes active land management. In a comparative study of sustainable urban development in Europe, Hall (2014) places the Netherlands in first place. According to Needham (2014), most people have good houses in good housing areas, and town centres are healthy, both economically and socially. Housing segregation between rich and poor is limited by international standards but is now growing. Facilities such as schools, shops and doctors are generally within easy reach of where people live.

Planning in the Netherlands is characterised by strong ambition to achieve effective land use. Dutch land-use planning goes beyond the standard 'passive planning' used in most countries whereby changes in land use require permission:

> Active and ambitious land-use planning is politically uncontested, and citizens expect their politicians to put a lot of time, effort and money into it. The Dutch see active spatial policy as the only way of creating the towns, cities and countryside that they want. Put negatively, they do not think that they should accept a physical environment that is shaped predominantly by market forces. In their opinion, the physical environment, even nature can and should be constructed (Needham, 2014: 19).

The typical approach to land-use planning in the Netherlands is referred to by Needham as 'planning by projects' (20). Those involved in realising the project are known in advance, while it is managed by the planning agency:

> Whereas with passive planning a land use plan is made to guide the objectives of unknown others during an indeterminate period, with

[1] This section draws extensively on Needham (2014).

> planning by projects (integral area development) the plans are made in order to manage a construction project which has already been designed (Needham, 2014: 20).

Direct involvement in land ownership has been an important policy instrument to achieve the ambitions of Dutch land-use policy. Dutch municipalities have long been involved in land development. The policy environment changed in the early 1990s. We first describe how the system worked up to that point and then discuss more recent developments.

Housing in the Netherlands was extensively subsidised until around 25 years ago. Subsidies were provided for rental housing as well as housing for sale. Much of the housing was built by housing associations (Needham, 2014). In 1985, social housing represented 43 per cent of the housing stock (Elsinga & Wassenberg, 2014). There was strong cooperation between central and local government in achieving housing and planning policy goals. The locations for housing development were determined in consultation between national and local government. The combination of land-use planning, municipal supply of land and housing associations in this period has been described as the 'the iron triangle' by de Kam (de Kam, 1988). Social housing now represents 32 per cent of the housing stock (Needham, 2014).

2.2 Land Management in the Netherlands in the Post-World War II Decades

The widely used approach to new development in this period involved a municipality (or a municipal land company) acquiring land from its original owners, subdividing it for different purposes, servicing the land and providing infrastructure. Serviced land would be sold to developers, housing associations (for social housing), owner-occupiers and others for purposes such as providing schools. The price at which land was sold to housing associations was determined by government regulation. This process enabled municipalities to ensure that their land development plans were realised. A second reason for undertaking this approach is that municipalities could use this process to recover the costs involved in the necessary public investments through selling the serviced land plots. Van der Krabben and Jacobs (2013) distinguish the ambitious public land development practised in the Netherlands from more limited land banking undertaken in some American and other cities where the public sector sells unserviced land to the private sector.

Statistics on the extent of public land development are only available up to 1982; up to then, building land bought from municipalities represented 80 per cent of all building land. Municipalities continued to dominate the building land market up to around 1994 (Needham, 2014).

An example with costings of how this model worked is shown in Table 1. This example is of a mixed development comprising 50 homes for sale and 40 homes for affordable rental (social housing). The cost of providing the serviced building sites is a total of €3,350,000 or €37,222 per plot (total of items 1 to 5 in Table 1). The

maximum value of this building land is €3,800,000 or €42,222 per plot. This is the gap between income from selling homes and construction costs (€3,000,000) plus the income from selling land for affordable rental home (€800,000). The profit on land development is €450,000 or €5,000 per unit. In this context, Needham points out that the residual value of unserviced building land[2] was not much higher than agricultural value. The price paid to the original land owner in this example is €150,000 or €1,667 per plot.

The residual value of land here is the residual after paying for the costs of planning, a high-quality public realm and infrastructure; the Dutch place high priority on an attractive physical environment in housing developments. A major influence on the low residual land value in this period was the fact that a high share of the development was affordable rental (40 out of 90 homes). Another factor was the generous allocation of land for open space; this land does not have high commercial value.

Why were the original landowners willing to sell their land at such low prices? One reason was that the high share of social housing in total housing output reduced the real market value of land (van der Krabben & Jacobs, 2013). Since land development was mostly undertaken by municipalities, competition among competing buyers did not drive up the land price. The profits on land development were modest and not attractive to private land developers. Farmers did obtain a premium relative to agricultural value, but not a large one. If the landowner refused to sell, the municipality could use a compulsory purchase order. Typically, this was not necessary but the presence of this policy instrument influenced the price paid.

Municipalities used their position as land developers to secure a housing mix. Within an estate, there would be areas for owner-occupied houses, more expensive rental homes and cheaper rental housing. The municipality as landowner sold separate areas to different developers (commercial and housing associations) at different prices on condition that the specified housing was built. If some areas were mostly social rental, this is because this was the housing most needed at that time (Needham, 2014).

For several decades this approach met the needs of all stakeholders (Van der Krabben & Jacobs, 2013). Private developers could acquire serviced land in good-quality locations and earned profits from the building of homes rather than land development. Most homebuilders were not interested in land development on account of the high costs; land drainage costs, in particular, are high in the Netherlands. Municipalities could undertake this work at lower cost due to economies of scale.

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[2] Residual valuation is a method of valuing land with potential for development. It is the difference between the value of the completed development and all costs other than land; costs include a required profit margin on development.

Table 1: Development Project Reflecting Dutch Practice Until c.1994

	Item	Unit Cost/Price	Total Cost	Notes
1)	Cost of making plan, supervising it, compensation for worsement	€4,444	€400,000	
2)	Cost of acquiring land	€1,667 (€5 per sq. m)	€150,000	Value in agriculture use: €3 per sq. m plus a premium of €2 per sq. m
3)	Cost of servicing land, shared spaces, and on-site infrastructure	€20,000 (€60 per sq. m)	€1,800,000	Land serviced to high quality
4)	Cost of off-site infrastructure	€5,556	€500,000	
5)	Interest charges	€5,556	€500,000	Depends on project timing
6a)	Cost of constructing houses, medium price, for sale	€180,000	€9,000,000	Includes a normal profit margin for the developer
6b)	Cost of constructing houses, affordable for rent	€120,000	€4,800,000	Construction costs lower than houses for sale
7a)	Income from selling houses, medium price, for sale	€240,000	€12,000,000	
7b)	Income from renting affordable houses	€120,000	€4,800,000	Capitalised value of net rental income plus supply subsidy
7c)	Norm prices for land for affordable housing	€20,000	€800,000	

Source: Needham, 2014.
Notes: This development comprises 50 houses for sale and 40 houses for affordable rent on a three-hectare greenfield site. 68 per cent of the area is used for housing plots, 22 per cent for roads, paths and cycle tracks and 10 per cent for public open space.

2.3 The Changed Situation from c.1994

The situation changed in the early 1990s. First, there was a strong increase in demand for owner-occupied housing due to lower interest rates, more accessible credit and a large growth in the number of households. Second, much less social housing was included in plans. Both of these factors increased the value of building land. Third, in the national spatial policy, it was decided that there was not a quantitative shortage of housing and therefore a less generous allocation of land was made for this purpose. A further consideration was that limiting the supply of land for housing would increase the value of building land. It was believed that this would result in increased profits for municipalities in land development and thereby support higher-quality development. The preferred locations for housing were identified in the national spatial policy.

All these factors encouraged commercial developers to acquire land and increased land prices. Higher house prices increased their potential profits while the advance identification of areas planned for housing reduced the risk of buying land. It is now more difficult for municipalities to acquire land.

Three broad approaches are now used to enable municipalities to pursue active land policies in the changed circumstances: the building claims model,[3] joint ventures and concessions. They are often combined within the one plan area.

The building claims model: This involves the commercial developers voluntarily selling the land to the municipality at a price similar to that at which they had purchased it; sometimes (amazingly) the developer even sells the land back at lower price compared to what they paid for the land. The reason for this, according to Needham (2014), is that the municipality commits to selling a specified amount of serviced land to the developer later:

> In other words the developer has bought the land not necessarily because he wants to build on *that* land, but because he wants to build *somewhere* in that plan area. The land that he had bought might not have had a favourable location, or it might be in small, dispersed parcels, or it might not be usable without infrastructural works on other parcels. Owning land gives a foot in the door, it is a way of demanding the right to build (Needham, 2014: 157).

The municipality then services the land and installs infrastructure as before. This retains the benefit that one organisation (the municipality) has the responsibility of servicing the whole area of the plan. However, there are now differences. The municipality is in a weaker position. It is no longer in a position to decide to whom it will sell the serviced land, thus limiting its ability to sell to competing builders. Developers also have more influence over the content of the plan. They have reduced their risk while securing guaranteed access to serviced land at a set price

[3] The building claims model was also used prior to the 1990s (Korthals Altes, personal communication).

for housing and can choose when to build (Van der Krabben & Jacobs, 2013). However, there are variations in building claims arrangements and in the relative influence of the municipality and developers, according to Korthals Altes (personal communication). In some cases the developers have most of the power but in other cases the local authority is in a position to offer development rights to another company if the original developer is not willing to develop the municipality's plan.

Joint ventures: This model involves establishing a company to undertake the land development function, with the shares divided between the developers and the municipality. The partners might contribute land already owned in the area in exchange for shares in the company. The company acquires land and services it, then sells the serviced land for development. The shareholders will agree among themselves as to whom the land will be sold and at what prices. The profits on land development are divided proportionately among the shareholders.

The concession model: This comes closest to the commercial development model used for large projects in many countries. The raw land is acquired, serviced and developed by one or more developers. The municipality cooperates with the developer, provided that the developer cooperates (and *vice versa*). Negotiations will take place between the municipality and the developers regarding the arrangements for land servicing and how this is financed and on the content of the plan.

An example of costs in a development of 80 houses developed under the concession model is shown in Table 2. The land cost works out at €15,000 per unit. This is a multiple of the land cost in the first example presented above (in the pre-1994 system). The construction cost figure shown in Table 2 appears relatively high, although no figures are shown for professional fees or sale costs so these may be included in construction costs. The on-site infrastructure costs are borne by the developer while the off-site infrastructure costs would be the subject of negotiations between the municipality and the developer. With the other models described above, these costs would be recovered via sales of serviced land. There is no VAT identified in Table 2 although housing in the Netherland is subject to VAT.

Municipalities continue to engage in active land management but their bargaining power is weaker. In all of the models described above, there is less competition in the building market. The cost of acquiring agricultural land has increased and this has reduced the resources available for municipalities to invest in the quality of local area plans (Van der Krabben & Jacobs, 2013).

Some are concerned about the implications for competition of the change in land development arrangements. According to Priemus and Louw (2003), all three of the development models described above (building claims, joint ventures and the concession model) have resulted in a lack of competition in the building market. They find that the earlier monopoly of the municipalities in the land market has increasingly made way for a monopoly of developers in the building market. However, Korthals Altes (2014) cites research by the Netherlands Competition Authority that found there is quite a lot of competition for new-builds on regional

housing markets, so consumers have alternatives provided they are willing to choose between locations.

Table 2: Development Project in the Netherlands Reflecting the Concession Model

Item	Unit Cost/Price	Total Cost	Notes
1) Cost of making plan, supervising it, compensation for worsement	€5,000	€400,000	
2) Minimum cost of acquiring land	€15,000 (€40 per sq. m)	€1,200,000	Value in agriculture use: €3 per sq. m plus €37 per sq. m development gain
3) Cost of servicing land, shared spaces, and on-site infrastructure	€18,750 (€50 per sq. m)	€1,500,000	
4) Cost of off-site infrastructure	€6,250	€500,000	
5) Interest charges	€6,250	€500,000	
6) Cost of constructing houses	€180,000	€14,400,000	Includes a normal profit margin for the developer
7) Income from selling houses	€250,000	€20,000,000	

Source: Needham, 2014.
Notes: The development comprises 80 houses, medium price, for sale on a three-hectare greenfield site. 76 per cent of the area is used for housing plots, 18 per cent for roads, paths and cycle tracks and 6 per cent for public open space.

There has been much debate in the Netherlands about how to address these problems. It is argued by Priemus and Louw that there will be little competition in the building market as long as land ownership is directly linked to building rights. The Dutch Bureau for Economic Policy Analysis (1999) (as reported by Priemus & Louw, 2003) put forward the idea that land ownership and development rights should be separated. Another proposal was to change the law to allow compulsory purchase of land on the basis of existing use value. In the past, municipalities were able to acquire land at existing use value due to market circumstances but this is no longer the case. However, they are still in a position to acquire land at less than its full commercial value, as discussed above.

The introduction of a new (to the Netherlands) land policy instrument is proposed by van der Krabben and Needham (2008). This is the practice of 'land readjustment', an approach that has been used in several countries. It is an alternative to public land development that addresses the issues of fragmentation of land ownership and also a way of financing infrastructure from increases in land and property value. Van der Krabben and Needham argue that, in some circumstances, it would be superior to public land development for urban redevelopment projects.

New legislation in 2008 addressed some of the issues in land management in the Netherlands. Under this legislation, municipalities were given enhanced powers to recover costs even in a situation in which they do not own the land. It also gave municipalities the authority to require private developers to include affordable housing in their development plans. For example, a municipality may prescribe that private land be developed with 50 per cent affordable housing and 50 per cent market housing; this mix will be reflected in the market value of the land. While these changes have given municipalities greater ability to achieve their objectives in situations where they do not own land, most municipalities continue to use a public land development strategy, 'mainly because they want to achieve strong control over developments' (Van der Krabben & Jacobs, 2013: 780).

There has been some questioning of Dutch land-use planning. One concern is the financial risks to municipalities from land development. In some periods, losses have been incurred on land development. Following the financial crash, public land development has again become profitable in the Netherlands.

Needham also expresses concern about the close relationships that exist between municipalities and private developers in the Netherlands. Both sides find this beneficial but Needham questions whether it always works for the public interest. He gives the example of self-build. It is public policy in the Netherlands to support this. However, with the building claims and joint-venture models described above, developers resist allocating land for self-build in new developments since it reduces their profits. In the past, Dutch municipalities could pursue their objectives with more autonomy than is now the case. Self-build continues to take place and a recent successful example of this is presented below (Almere).

Another concern arose from the economic recession and projections of slower demographic growth. Changes in forecasts make it more difficult to pursue ambitious long-term plans. According to Needham, this has led some Dutch planners to propose a different type of planning, called 'organic urban development' (Needham, 2014:220). This involves a less integral approach to planning. Smaller projects would be pursued within a planning framework and there is more emphasis on the role of smaller developers.

2.4 Compulsory Purchase Powers and the Right of Pre-emption

Where a land-use plan has been adopted, compulsory purchase is permitted if needed to achieve the plan. A number of procedures must be undertaken to implement compulsory purchase and establish the required compensation.

Compulsory purchase can be used if a landowner is unwilling to develop their land in accordance with the plan or to sell to the municipality. An application for compulsory purchase may be contested on the grounds that an owner can show that they are willing and able to develop their land in line with the municipal plan; this is termed a 'self-realisation claim'. Some authors argue that the self-realisation principle has reduced the bargaining power of municipalities and threatens their ability to undertake integrated development. However, research by Korthals Altes (2014) has shown that a large majority of self-realisation claims are rejected by the courts. The most common grounds on which these claims are rejected are that the owners have not taken clear and tangible steps to demonstrate their intention to develop the land in accordance with the local area plan or that they have not assembled sufficient land in the area to independently realise part of the plan. Claims for self-realisation may also be rejected on the grounds that the plans by the owners are not in accordance with the municipal plan. For example, the owner may be planning a housing programme in a higher price range than indicated in the municipality's planning policies. Korthals Altes points out that the combination of planning and compulsory purchase powers means that Dutch landowners must take planning seriously:

> Landowners who do not implement the plan in the way that the local authority has stipulated may be stripped of their title. Planning thus provides an agenda for landowners to co-operate with local authorities to implement their plans. As such, compulsory purchase is a way of effectively overcoming 'ownership constraints' (Korthals Altes, 2014: 78).

The starting point in valuing land for compulsory purchase is the average value of the land within the designated plan area. Two points worth noting in relation to this are as follows. First, it is the average value within the plan area as a whole that is paid, not the value of the individual plot. Thus, land that is to be used for a house or office receives the same as land to be used as a park. Second, the land value is reduced to take account of the cost of providing infrastructure.

From 1985, municipalities have been able to designate areas in which they intend to use pre-emption rights.[4] The right of pre-emption means that the owner has to offer the land for sale to the municipality before it can be offered to another buyer. The price paid in this case is the same as when a CPO is applied, but the process is quicker. The right of pre-emption limits the ability of the landowner to sell their land at a higher price to a developer than the municipality would pay. The establishment of a pre-emption right in an area is usually done before the land-use plan has been prepared, so as to prevent a rush of sales.

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[4] From 1985 to 1996 pre-emption rights could be used for urban renewal only and were rarely used. In 1996 these rights were extended to municipalities that were planned to grow according to national or provincial spatial planning policy. The law was changed in 2004 and now all municipalities may use these rights. In 2006, 68 per cent of municipalities were doing so (Needham, 2014).

2.5 Land Leasing and Active Land Management

Active land management in the Netherlands is complemented in some cities by a system of public leasing of land. It is most extensively used in Amsterdam and the discussion here focuses on that city. Since 1896, the standard method of land disposal used by the municipality of Amsterdam has been to provide ground leases on land rather than sell it outright. As a result the city now owns 80 per cent of the land in Amsterdam.

Leaseholds are regulated by law but the law gives the parties considerable freedom to set the conditions. The person taking out a ground lease on land has the right to use the land and buildings on it in accordance with the conditions of the lease in exchange for annual payments to the land owner. In some cases there is the option of paying all future ground rent payments over the remaining period of the lease in a single payment; this is known as paying a premium. The lease can be sold or transferred to other parties but the same conditions apply to the new leaseholders. Leases can be taken out by individuals, housing associations and commercial organisations. The fact that upfront payments are not required facilitates housing associations providing social housing; in addition, it is the policy of the city of Amsterdam to set lower ground rents for social housing (OECD, 2017).

The general conditions under which leases are issued in Amsterdam are revised at infrequent intervals. The ground rent payable is calculated by applying the rate of ground rent to the value of the land. Before 1966 leases were granted for periods of 75 or 50 years; after 1966 leases were issued for a period of 50 years. After 50 or 75 years, the terms are reviewed and are revised in line with the general conditions applicable at that stage. At that time, the ground rate payable is also revised in line with the current market value of the land and the current ground rate of ground rent. This may result in a large increase in the ground rent payable. A new system was introduced in 2016 (described below).

The work of the city in preparing new land for development is separate from the long-term administration of land leases. Active land management in the city may involve buying property, demolition of old buildings, laying out streets and parks, and granting new ground leases. At the end of the redevelopment project, the ground lease right is initially sold to the Ground Lease Corporation, which in turn will provide leases to individuals or organisations. This makes it possible to establish the financial results of each project. Each project incurs costs and receives revenue in the short term by selling ground lease rights to the Ground Lease Corporation, with either a profit or loss.[5] The Ground Lease Corporation's biggest cost is the interest on the finance used to purchase the ground lease right, while their revenue

[5] If leasing of land were to be used (again) as a method of disposing of public land in Ireland, the intermediary of a leasing corporation could be an important part. This device enables the local authority to recover land developer costs within a fairly short period while the longer-term benefits of leasing (as discussed in the text) can be still be secured. The accounting implications for the overall public finances would depend on how Eurostat would classify the leasing entity.

consists of annual ground-rent payments plus premiums (Van Veen, 2005). The net annual financial profit from leasing in 2015 in Amsterdam was €105m.

The use of land leasing by public bodies in urban areas was motivated by a desire to counter land speculation and as a tool for implementing spatial policies (Ploeger & de Wolff, 2014). According to the OECD (2017), the main argument put forward by its proponents in 1896 was to allow the community to benefit from the increase in land value. This has not lost its relevance. In addition, the use of land can be regulated through leases. When land for new building is leased, the lease will specify the land being built upon in a way that is consistent with the municipality's land-use plan and within a specified time period. The leaseholder must maintain the land and the buildings and accept installation by the city of items such as electrical lines, etc. Failure to adhere to the terms of the leasehold may result in fines or, in extreme cases, reassignment of the ground lease to another party.

There are also advantages for the person or organisation leasing the land. Their initial capital costs are lower as no upfront payment is required for the use of the land. This reduces the risks for the developer and means they do not need to acquire high-cost finance for land acquisition. This is of particular value when interest rates are high, as noted by the OECD (2017). For the buyer, the initial purchase price will be lower.[6]

Permission is required from the municipality if the owner wishes to change the land use. Where this results in a higher land value, the ground rent is increased.

From the perspective of the leaseholder, a disadvantage is that, after a period of 50 or 75 years, the renewal of the lease in line with the current market value may result in a large increase in the ground rent payable. In 2016, a new system of perpetual ground leases was introduced in Amsterdam to address this concern. Under the new system, the ground rent is set initially based on market value, but there is no future periodic revision of the ground rent. The ground rent is only indexed annually for inflation. This means leaseholders avoid the prospect of subsequent future sudden changes after the term of the lease. If the land changes to a higher value use or the building is modified to increase its value, a leaseholder is still required to pay a higher rent. The municipality, however, no longer benefits from increases in land value that occur over time, apart from those relating to change in land use. The OECD (2017) notes that a better alternative to this reform would have been to undertake regular reassessments of land value.

Houses on privately owned land in Amsterdam have been estimated to be on average 10 per cent more expensive than those on land leased from the city. This covers different types of leases (Gautier & van Vuuren, 2017). The price gap would be greater where the ground rent is close to the current market value.

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[6] This benefit will be counter-balanced by the requirement to make annual lease payments. However, there is still a benefit in paying a lower initial price and hence a lower requirement for a deposit.

There has been much debate in the Netherlands on the ground-lease system. Dutch municipalities have moved away from leasing of their land to more commonly selling it (Ploeger & de Wolff, 2014). When the system was introduced in Amsterdam in 1896, most people were tenants so landlords were responsible for the ground-lease payments. Now owner-occupation is the most common form of tenure, so leasing captures value from residents (Korthals Altes, personal communication). Large increases in payment may arise on renewal of leases; this became a source of dissatisfaction for residents and led to political pressure to either replace ground leasing with ownership or adopt perpetual leases.

In Rotterdam, The Hague and Utrecht, existing leaseholders have been given the option to convert to ownership. Perpetual leases are retained in Rotterdam in specific cases such as long-term redevelopment of an area and for housing associations. Likewise in The Hague, leases are maintained in special cases such as areas of reconstruction.

Leasing is a means of land value capture. In addition, it is a useful instrument to pursue active land management and one that makes the financing of development easier by separating the land and building costs. The Dutch experience illustrates that leasing of public land at scale in a European country is a feasible proposition and one that yields benefits (as outlined above). At a time when Ireland is planning to allocate a substantial volume of publicly owned land to housing, the option of leasing the land is well worth considering. Ireland has earlier experience of leasing land for housing. The ground rentals on public land in Ireland have been reduced by inflation to typically very low values.

Box 1: Leasing of Land to Achieve Affordability in London

A recent initiative in London illustrates how the leasing of publicly owned land can be used to secure permanent affordability of housing. 'Naked House' is a voluntary, non-profit, affordable housing developer that has received support from the Greater London Authority. Homes are provided as shells without partitions walls, flooring or finishing, and the occupants can complete them over time. The upfront cost of the land has been removed by local authorities providing land on a leasehold basis. The local authority retains the freehold and the home buyer pays it an annual ground rent.

The removal of the initial land cost and the basic design has enabled prices to be up to 40 per cent below normal prices; homes are priced in the region of £150,000 to £350,000. The terms of the lease require that the buyer pass on the discount to subsequent purchasers to achieve permanent affordability. The model is being tested initially with the development of 22 apartments; grant funding of £500,000 has been provided by the Greater London Authority (Crichton-Miller, 2017).

These basic homes must adhere to the normal building regulations for standards such as structures, energy efficiency, fire safety, etc. The apartments are dual-aspect and spacious, and comply with the London Housing Design Guide (Braidwood, 2017).

2.6 VINEX and Housing

In 1991, the Fourth National Spatial Strategy Supplementary Volume (known as VINEX) was published by the Dutch Department of Housing, Planning and the Environment. It formed the basis for a 10-year housing programme, from 1996 to 2005, but implementation continued beyond that period. Central government provided money for decontamination of land and to provide access, but otherwise the plan was to be self-financing. The plan aimed to meet housing needs in suitable locations. Of the housing produced under this plan, 62 per cent has been in 90 VINEX locations consisting of urban extension schemes. Of the 90 locations, there were 25 major schemes. These are concentrated in the Randstad conurbation, are close to the centre of the nearest major city and well connected to it by good public transport, typically with a journey time of half an hour or less.

The spatial strategy is implemented by contractual agreements between central and local government.

> The provinces and municipal governments were asked to implement the national spatial strategy, by drawing up proposals for local housing growth, expressed as 'covenants'; in response the government provided grants for land decontamination and towards connecting up sites. The process was relatively simple, with few controls over what was to be built other than the requirement to provide 30 per cent of social housing, and to concentrate housing where there was already infrastructure (Hall, 2014: 167).

The Dutch municipal bank is a significant part of the success of the development process in that it makes low-cost finance available to municipalities. In the rest of this section, a number of examples of successful developments in VINEX locations are presented, taken from Hall (2014).

Almere

Almere is a new town and VINEX location some 25 kilometres from Amsterdam, with a population of 191,000 in 2011; the population is projected to reach 350,000 by 2030. During the 1990s, there was growing interest in self-build in the Netherlands and the council allocated a plot of land for 65 self-build homes. It was realised that many of the prospective self-builders could not take the financial risk that their house might be unsellable in the open market. An affordable housing provider was brought into the process, took over the investment risk and contract negotiations with builders, and also advised on the use of green building technologies.

Later, when the financial crisis led to a fall in house-building, the council decided to undertake a massive expansion of the original experiment in self-building. It allocated a large area (100 hectares) of city-owned land in Almere Poort (originally reclaimed from the sea) for this initiative. The council master-planned the area and divided it into 15 districts, each of which is divided into individual plots. Buyers of a plot know what type of building will be permitted in nearby plots. There is also a

higher-density, mixed-use central area, where people come together in groups for the development of apartment blocks, retail and office space.

Self-build in Almere has been a popular option and more resilient during the financial crises than developer-built housing. During 2011, self-build accounted for one-third of development in Almere. The resilience of self-build is consistent with Ireland's experience.[7]

Amersfoort

Amersfoort is a city of 147,000 people, located just outside the Randstad (the megalopolis consisting primarily of Amsterdam, Rotterdam, The Hague and Utrecht, and their surrounding areas). Vathorst is the third new urban quarter of Amersfoort and a VINEX location. When complete in 2018, it will consist of seven distinctive neighbourhoods and have a projected population of 30,000. The development is to include schools, an agricultural college, football fields, tennis courts and two health centres.

In this case the municipality did not own the land, but it initiated development and 'determined that it should take place on its terms' (Hall, 2014: 159). The mechanism used for the initial development work was a joint development company, called OBV. The council was one shareholder while a consortium of five companies that owned land in the area was the other shareholder; the companies concerned were ones the council admired on account of the quality of the work they had done previously. OBV borrowed money (15-year loan) from the Dutch Municipal Bank and the Local Government Funding Agency, BNG. This loan will be repaid from the proceeds of land sales.

The area was master-planned and the plan specifies that, for each 500 houses, 30 per cent must be affordable/subsidised. The master plan seeks to maximise the use of bicycles. The railway station was jointly financed by the Dutch government and OBV. Despite this, most people use cars to travel to work and to take children to school. There is extensive use of district heating and combined heat and power. This is an interesting model for undertaking land development in a scenario in which the council does not own the land.

Ypenburg

Another VINEX location is Ypenburg, a residential area within easy reach of The Hague. It was originally a military airfield. The local authority took the lead in developing it as a residential area by commissioning a master plan. The area was divided into five neighbourhoods to accommodate a total population of around

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[7] In Ireland, total housing output fell by 91 per cent between 2006 and 2012 while the corresponding fall for the output of individual houses (a proxy for self-build) was 79 per cent. If total housing output had followed the same trend as self-build since 2005, the level of housing output in 2016 would have been 24,500 in 2016 compared to actual output of just under 15,000.

30,000. A characteristic of this development is the high quality of the transport infrastructure, including two new tramlines. As with other Dutch developments, this was made possible by the public sector using the increase in land value arising from housing development to invest in this infrastructure.

2.7 Changes in National Planning Policy

The current national statement on planning policy as set out in a 2012 government document, *National Policy Strategy for Infrastructure and Spatial Planning*, is a departure from previous policy, with a move away from national spatial planning. This document, in contrast to previous national policy statements, does not have a policy on the desired pattern of urbanisation such as whether models such as the 'compact city' should be followed. The reason given for this is that the national government now views these issues as matters for provincial and municipal governments. This re-emphasises the importance of provincial and municipal governments to the achievement of planning goals (Needham, 2014). Janssen-Jansen (2016) is critical of the move away from national spatial planning, which was also evident in the previous National Spatial Strategy published in 2004. She points out that some of the ideas and concepts in earlier national planning documents were implemented, although not to the extent originally envisaged: 'Sometimes this was perceived as a problem, but in other instances it was not too much of a problem as new insights and the evolution of practises led to other policy decisions' (Janssen Jansen, 2016: 41).

2.8 Some Conclusions on the Dutch Experience

Following changed circumstances since the early 1990s, it has become more difficult for municipalities to practise public land management. They have, however, continued to use proactive approaches to achieve quality new residential development. There are still challenges in Dutch housing, with shortages of affordable housing at present in major cities. Despite some reservations, the VINEX plan pursued in recent years has been a 'triumphant success', according to Hall:

> It is impossible to travel through these neighbourhoods without marvelling at the huge scale and generally high quality of the development. Effectively a public corporation parcels out the land to private developers who competitively bid to build different residential areas—but all following neighbourhood master plans which in turn fit into the overall concept (Hall, 2014: 172).

Reasons for the successful delivery of the VINEX programme and Dutch development more generally include the following:

- Planning is taken seriously.
- Local authorities have expertise in land management and can also hire specialists.

- They enjoy triple-A credit ratings and hence can borrow money at low cost.
- Negotiated agreements are widely used but there are also effective instruments such as compulsory purchase to break through stalemates.
- Those adversely affected by planning are compensated (Korthals Altes, personal communication).

Dutch land use planning continues to be widely acclaimed for its achievements.

3. Housing and Urban Development in Germany

The housing market in Germany is characterised by a large private rental sector with high security of tenure and stable house prices. Historically, it has had a high level of housing output, with housing completions since the 1950s double the level produced in the UK. Following German reunification in the early 1990s, the development of new apartments doubled, stimulated by subsidies to both private landlords and non-profit housing associations; this was achieved through the provision of low-interest loans and tax relief conditional on rents being below the market level for 60 years (subsequently reduced to 30 years). Housing output peaked in the mid-1990s and created a housing surplus, and then an extended period of falling output.

There are now problems in Germany's housing situation. Current output is below the level needed and there are housing shortages in the rapidly growing cities, leading to major pressure on affordability. This problem has been reinforced by the loss of subsidised housing arising from this housing reaching the end of the rent-restricted period, in addition to some privatisation of social housing (Davies *et al.*, 2016).

Despite these difficulties, it is argued by Davies *et al*. in a comparative study of Germany and the UK that Germany is in a better position to respond to the pressures compared to the UK. The growth of housing output in Germany in recent years has been stronger than the UK and its housing development sector is more diverse; it includes large house-builders but also many smaller regional builders and a significant not-for-profit sector. Davies *et al*. point out that Germany's land supply is more responsive than that in the UK, with local authorities playing a more proactive role in the land market:

> German local authorities commonly act to intervene in the land market, buying up and assembling sites, and delivering infrastructure before returning them to the market (Davies *et al*., 2016: 4).

There is a much closer alignment between the granting of planning permission and new housing supply in Germany compared to England. Both countries have sought

to prioritise the reuse of existing sites over greenfield development (Davies *et al.*, 2016).

3.1 Provision of Infrastructure

It is the responsibility of the municipality in Germany to service the land and provide the local infrastructure in an area approved for development, including streets, parking areas, technical services, green space and as social infrastructure such as playgrounds. Municipalities are entitled to recoup up to a maximum 90 per cent of the cost from the landowners. This puts the former in a strong position to influence the shared facilities and to recoup the related costs. The provision of the infrastructure is commissioned by the municipality, which can, however, contract this out to the developer (Needham, 2012). Another provision is that the owner has to pay compensation for the destruction of nature that occurs as a result of the development (Baing, 2010).

3.2 Urban Development Measures

Where development is desired in Germany but is not taking place, the area concerned may be designated an 'urban development zone' and made subject to an 'urban development measure'.

An *urban development measure* allows for the swift acquisition of land (large derelict sites as well as greenfield land) for building purposes. Using this legislative measure, the municipality has the right to purchase the land at its existing value. The municipality uses this measure to assemble land, and provides the public infrastructure. It then sells building plots to buyers who undertake to build on the land in accordance with the local area plan. The cost of this measure is covered by the difference between the initial value of the land and its final value after the infrastructure has been put in place.

There are strict conditions on when this measure may be used:

> It can only be used if the land is not brought forward for development in other ways; that is, a power of last resort, and owners are able to prevent the process from happening if they themselves bring the land forward for development in accordance with the plans (Davies *et al.*, 2016: 18).

While this is not the typical way in which land is developed in Germany, Davies *et al.* point out that it acts as an incentive for owners to develop their land.

3.3 Land Readjustment

Another mechanism used to facilitate development is *urban land adjustment*. This approach was initially used for rural land adjustment but extended in 1940 to built-up land. This mechanism is used where the fragmentation of land ownership is an

obstacle to development. It can be done on a voluntary basis, but in Germany there is provision for the use of compulsory measures if voluntary agreement cannot be reached. According to Monk *et al.* (2013), it is one of the main instruments of local planning used in Germany today.

It works as follows: The process is formally initiated by the municipality which decides the boundaries of the scheme. The municipality virtually merges all of the land into one area and a plan is devised for developing the combined land in the scheme. Some land is allocated for public purposes, such as roads, parking lots or playgrounds. The remaining land is then redistributed among the original landowners.

Two methods are used in Germany to reallocate land to the owners. One method is based on size. In this case, the municipality can retain up to 30 per cent of the combined land area on greenfield land for public purposes without compensating the landowners. In the case of previously developed land, the maximum the municipality can retain without compensation is 10 per cent. The landowner receives a building plot proportionate to the size of the original holding, but one that should be of higher value. The other method use is based on value. In this case, the landowner is entitled to receive a building plot that is at least as valuable as the original plot. If this plot has increased in value as a result of the land readjustment, the landowner is required to make a payment to the municipality for this. This contributes to the municipality's costs in undertaking the readjustment (Davy, 2007). According to Davy, most landowners whose properties have been included in land readjustment are happy with the process.

3.4 House-Building

House-building in Germany is stimulated by a complex range of subsidies. Building without subsidies accounts for around 60 per cent of house-building. Housing subsidies can be availed of by anyone including individuals, non-profit organisations and private firms. Self-building is a significant part of German housing supply. According to Needham (2012), profit is not the main motive in housing supply, which is not dominated by major developers or large-scale building companies.

3.5 Recent Examples of High-Quality Urban Development

Freiburg: a recent example of successful new housing and infrastructure development underpinned by land value capture

Freiburg is a German university city with a population of 230,000, located beside the Black Forest. It is described by Hall as an 'exceptionally attractive' city even by the high standards of other German cities, with beautiful pedestrianized city-centre streets set between restored medieval buildings. The city centre is surrounded by 19th and 20th century suburbs. In recent years two planned suburban extensions have been added: Vauban and Rieselfeld; their development is discussed below.

Freiberg is a very environmentally friendly city. It became the first German city to have a green mayor, in 2002. Features that show the high standard of environmental sustainability in Freiburg include: 15 district-heating systems that produce half the city's energy requirements; extensive use of solar PV; effective waste segregation and the incineration of the limited volume of the residual waste to produce electricity for 25,000 homes; high usage of public transport and bikes, and a high level of energy efficiency in its buildings.

The strategic plan for the city aims to keep the city compact by redeveloping brownfield rather than greenfield land. In recent years, two brownfield sites became available on the urban periphery. One of these was an old sewage works (Rieselfeld) and the other was an old French army barracks (Vauban). Both of these have been developed as urban extensions within a 15-minute tram journey of the city centre.

In both cases the vision was to produce low-energy developments with no very tall buildings on account of these not being suited to families. The maximum height is 12.5 metres, which is four or five storeys, with the top storey used for storage. Both suburbs include schools, kindergartens and small shops.

In the case of Rieselfeld, the original plan was that half of the housing was to be social housing. However, government cuts led to this being reduced to one-quarter. Following the cut in subsidies, few developers were willing to invest. The municipality owned the land. It borrowed money to pay for infrastructure and planning and was able to recover this money by selling serviced sites. Sites were made available to groups that came together to submit a preliminary design. On this basis it was possible to provide homes (for ownership) at up to 25 per cent below the usual price.

In the case of Vauban, the city had to resolve a dispute with environmental activists. In the course of doing so it came up with a model whereby each piece of the development (a superblock of buildings plus semi-public space) would be undertaken by a local building group (Baugruppe) working with their own architect. The future residents were involved in the design through extensive use of co-ops, which not only commissioned groups of houses but also designed and managed the common spaces. This was also extended to Rieselfeld.

Hall comments:

> This mode of development depends vitally on one precondition: the city acquires the land and builds the necessary infrastructure before development takes place, using investment funds through a trust. The city's investment is then recovered by selling off sites to builders and individuals. This has worked triumphantly, because good location and brilliant design have generated huge demand, effectively allowing the process to self-fund itself. And, by engaging the future residents in the design process from the start, many of the development risks are simply removed, generating strong built-in neighbourliness and

> accumulated social capital as soon as the first residents move in (Hall, 2014: 258).

The process of preparing the city land-use plan was highly participatory from the start, with 19 working groups involved. According to Hall, the outcome in both Vauban and Rieselfeld is a development of 'quite extraordinary quality' (261), characterised by a universal devotion to good architectural architecture:

> The overall lesson is that new city quarters can be developed that are as attractive and valuable as historic ones, provided there is sufficient long term investment up front in the public realm and infrastructure (Hall, 2014: 262).

Both Rieselfeld and Vauban were built without any contribution from the city budget. All of the money was repaid by land sales.

HafenCity Hamburg

HafenCity is an ambitious docklands redevelopment project and one of the largest urban regeneration initiatives in Europe. It covers an area of 157 hectares, which is being developed in accordance with a master-plan that sets out a 25-year timeframe. The process is managed by a city-owned development company. The city already owned over half the land and purchased another substantial share from the national railway company; in addition, it quietly bought derelict buildings in the area in advance of development. Developers compete for the right to develop each section of the plan. This competition is based not only on cost but also on the quality of the proposed developments.

The costs of the infrastructure are financed by the sale of sites, while the project also received federal government funding. The infrastructure includes a district-heating system. Housing sites are advertised at fixed prices. Some of the development is undertaken by cooperatives of future residents who buy land together and procure the construction of their own building. These cooperatives are often able to achieve high-quality housing at a cost well below market rates. The residential apartments are 'extremely spacious and remarkably economic to rent' and 'cost roughly half the price of a similar place in the London Docklands' (Hall, 2014: 101).

One aspect of HafenCity that is controversial is a policy of attracting wealthier residents and international investors. The development company justifies this on the basis that poorer residents were already well housed elsewhere and that this policy makes the financing easier (Hall, 2014).

4. Austria

Housing in Austria is characterised by both affordability and stability. Housing output was sustained during the economic crash, and there is an ongoing substantial level of new housing output that is affordable. Austria's housing policy is distinctive among advanced countries in that the larger part of public expenditure is devoted to supply-side subsidies. These subsidises are extensive and cover both rental and owner-occupied housing. Subsidies are typically provided in the form of low-interest loans. In Vienna, of the 9,500 total completions in 2014, it is estimated that 6,500 were subsidised (Mundt & Amann, 2016). The vast majority of these were apartments. Despite the extensive level of subsidies provided, total state support for housing is not particularly high by international standards. In a comparative study of six EU countries,[8] total state support for housing in Austria was the second lowest, at 0.9 per cent of GDP in 2011 (Wieser & Mundt, 2014). This illustrates that it is feasible to provide moderate subsidies for a substantial share of new housing without an excessive level of public expenditure and that well-designed housing subsidies do not cause housing bubbles.

Over one-fifth of the housing stock in Austria constitutes social housing. Around one-third of this is provided by municipalities. However, new social housing output is primarily undertaken by limited-profit housing associations (LPHAs). These associations, supported by the provision of low-cost loans, provide moderately priced rental accommodation, as well as owner-occupied housing subject to income limits and price regulation of subsequent sales (Forster, undated-b).

Social housing accounted for between 28.0 and 36.7 per cent of all housing built in Austria between 2000 and 2014; its share was higher in regions with high population growth and represented over half of housing output in Vienna between 2000 and 2008. Social housing output played an important stabilising role following the global financial crisis (Norris & Byrne, 2017). The market for single family homes is dominated by self-builders who buy or inherit building plots (Mundt & Springler, 2016).

Municipalities are 'legally encouraged' to provide land for social housing at affordable prices, although this is not always done. The strong position of the LPHAs in the housing market enables them to be competitive in the land market (Amann & Mundt, 2005).

There has long been significant public intervention in the land market in Vienna. In 1984, the Housing Fund (Wohfonds_Wien) was established to provide land for subsidised housing and to supervise the restoration and upgrading of old dwellings. This is a public body to which municipal land was donated (Lawson, 2009). Since then, this agency has been involved in buying, developing and reselling land (Forster, 2012). Since its establishment, it has provided land for more than 51,000

[8] The six countries were Austria, the Czech Republic, France, Great Britain, the Netherlands and Spain.

apartments. In addition, the renovation of more than 150,000 dwellings has been subsidised, including energy efficiency improvements (Forster, undated-a).

On larger sites the Housing Fund organises developer competitions. This method was introduced in 1985 with the goal of both reducing costs and encouraging innovation. These competitions are open to both LPHAs and for-profit developers. Proposals are assessed by an interdisciplinary jury on the basis of multiple criteria, including planning qualities, costs of construction, future rents, maintenance costs and sustainability (building materials, energy consumption). The winning proposer gets to buy the land at a moderate cost and receives a low-interest loan that covers 35 to 40 per cent of the project costs. In the case of half of the accommodation, the tenants are nominated by the city council, while the other half is filled by the developer, also at an affordable rent.[9] According to the city of Vienna, these competitions have led to considerable improvements in the energy rating of dwellings, the quality of open space and communal facilities, and have also improved cost efficiencies by 20 per cent (Holeywell, 2013; Deutsch & Lawson, 2012).

To reduce costs, a trend in recent years has been for LPHAs to lease rather than buy land from municipalities. The LPHAs then make annual fixed interest-rate payments to the municipality.

An architect from Vienna, Gabu Heindl, on a recent visit to Vancouver to speak about housing was asked for advice for cities such as Vancouver that struggle with housing affordability. She replied:

> The most important piece of advice today is to not sell any public land. Do not do that. Land has been and is the most precious thing and it will be so much more precious in the future. Land ownership dictates who has access to what areas and how the city should grow. It's something that I believe Vienna is being as careful with as it can.
>
> But if land is to be sold, it should be sold to collective structures so that it doesn't go into the private, capital market. Please do write that in really big letters!
>
> There will be a serious fight for the access to urbanity in the future. If we know that cities are the places where people have access to possibilities, to mobility, to culture, to jobs, to shops, governments should not hand out big portions of the city to private owners (Heindl as quoted by Cheung, 2017).

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[9] If for-profit developers receive a subsidised loan, they must adhere to rent limits for the duration of this loan. The limited-profit associations are subject to limits on rents permanently even if no subsidies are received (CECODHAS, 2013).

Not selling land does not help if the land is not developed. The point is that land should be used in a way that supports the goals of public policy, including permanently affordable housing.

5. Housing and Urban Development: Summarising International Experience

This paper has described a range of international experiences on how the treatment of land can support the supply and affordability of housing and promote quality urban development. This final section summarises international experiences that may be relevant to Ireland's efforts to address these issues.

5.1 Public Land Management

Public land management involves a public agency purchasing land, providing infrastructure and servicing the land, followed by sale or leasing of the land to developers of different kinds. It is used to assemble land for both greenfield and brownfield development. It has been adopted most extensively in the Netherlands but other countries in which it is applied France, Finland, Sweden and Germany, as well as some Canadian cities; active involvement in the land market is also a feature of a number of US cities. Public land management is probably the most effective way of achieving the objectives mentioned above.

In the Dutch experience (see Section 2), public land management was at its most effective during the post-war decades up to the mid-1990s. This approach ensured that serviced development land was available for housing and other purposes. The cost of providing infrastructure was covered by the difference between buying land at a low price and then selling serviced land at a higher price; this was often profitable. Mixed developments were achieved by selling land to commercial developers and housing associations; land for social housing was sold at a lower price, and a high share of housing output consisted of social housing. This approach made it possible to realise the municipalities' land-use plans. High-quality developments were achieved, including generous provision of green space. After taking account of infrastructure costs, the allocation of land for social housing and green space, the residual value of unserviced building land was not much higher than its agricultural value.

The model came under pressure during the 1990s for a number of reasons, including cuts in social housing and higher house prices. The areas for housing development were announced well in advance and private developers became significant buyers of land so that municipalities had to pay higher prices. The public land management model was adapted in a number of ways (as described above), and the Netherlands continues to be successful in delivering quality housing at scale in a planned manner. Housing, however, has become less affordable. The Dutch experience illustrates the inter-dependency of land and housing: land policy can

support affordable housing but a strong affordable housing policy also reduces pressure in the land market.

There is provision in the Netherlands for municipalities to acquire land through compulsory purchase but in practise this is seldom used (Korthals Altes, 2018). However, it remains a factor in the background when municipalities are negotiating with private land owners. This is referred to by Needham as 'negotiating in the shadow of the law' (Needham, 2018). According to Korthals Altes, the combination of planning and compulsory purchase powers means that Dutch landowners must take planning seriously: landowners who do not implement the plan in the way the local authority has stipulated may have their land acquired via compulsory purchase.

Dutch municipalities are also able to acquire land using pre-emption rights. The right of pre-emption means that the owner has to offer the land for sale to the municipality before it can be offered to another buyer. The price paid in this case is the same as when compulsory purchase is applied, but the process is quicker. The right of pre-emption limits the ability of the landowner to sell their land to a developer at a higher price than the municipality would pay.

Other factors that contribute to successful urban development in the Netherlands are the expertise of local authorities in land management and their triple-A credit ratings. Their high credit ratings enable local authorities to borrow money at low cost for investment in land development (among other purposes).

In Germany, local authorities have the authority to designate areas for development in which they are then allowed to acquire the land at its existing value. The municipality uses this measure to assemble land and to provide the public infrastructure. It then sells building plots to buyers who undertake to build on the land in accordance with the local area plan. This measure can only be used in defined circumstances where development is not taking place. However, the presence of this power is an incentive to develop land.

In the case of Vienna, effective arrangements have been established for the provision of land for housing that balances affordability and cost recovery. The Housing Fund was established to provide land for subsidised housing. It sells land to affordable housing providers at a price that it is sufficient to cover its costs, yet low enough to underpin housing that is affordable. The fund does not have any special legal rights in buying land. However, it is able to secure land at reasonable prices. For the most part, it is not in competition with privately financed developers, who mainly buy land in high-prestige areas for upmarket housing. This reflects the fact that the subsidised housing providers serve a large proportion of the housing market, including middle class tenants. The subsidised housing providers are mostly limited profit associations operating on a cost rental basis; i.e., the rents charged are sufficient to cover historic costs net of moderate subsidies received.

5.2 Land Readjustment

Land readjustment is an alternative way of assembling land and recovering the costs of infrastructure investment. There are different models of land readjustment but, 'in a nutshell, land readjustment gives all affected property owners in a redevelopment district the power, by majority vote, to approve or disapprove the transfer of land rights to a self-governing body for redevelopment' (Hong & Needham, 2007: xv). Following reorganisation, each owner receives a plot of land at least as valuable as the original plot, but one that is smaller in size. Some of the land will typically be allocated for public purposes such as roads. One advantage of this relative to public land management is that the public body does not need to buy any land; instead the land is transferred temporarily into the entity undertaking the land readjustment. From the owners' perspective, an advantage is that they get to retain land ownership and thus the opportunity to participate in development. Land readjustment is one of the main means used to assemble land for development in Germany, and the adoption of land readjustment there is not dependent on agreement of the majority of land owners. Nonetheless, most landowners who participate in this process in Germany were found to be happy with it (Davy, 2007).

5.3 Compulsory Sale Orders

Compulsory sale orders are a policy instrument recommended by the Scottish Land Reform Review Group (LRRG) that could be used to unlock vacant land. The idea is that local authorities be given new powers to require that land vacant or derelict for an extended period be sold at public auction. The conditions in which it could be triggered would have to be carefully defined to balance the rights of owners and the public interest in having urban land developed. If the land were auctioned without a reserve, it is likely that a sale would take place. This policy instrument could be applied to vacant buildings as well as land (LRRG, 2014).

As with land readjustment, this policy instrument has the advantage that it does not require the local authority to purchase the land (or property). It does not, in itself, address infrastructure nor achieve land value capture. However, it could be a relatively straightforward measure that would transfer land ownership from passive to active owners. In a situation where there are few land transactions, it would establish the market value of land. The institutional requirements to implement this measure are less demanding than those for the other instruments discussed above.

5.4 Land Leasing

Leasing is a way in which public land can be made available for development. The public body retains ownership of the freehold of the land while making the land available to be used by others subject to conditions, including payment for the land. Since 1896 it has been used as the primary means of disposing of public land in Amsterdam. The municipality now owns the freehold on around 80 per cent of the city's land. Leasing rather than full sale of land was introduced as a means of allowing the community to gain from future increases in land value and to reduce

speculation. There are benefits for the leasee as well. Those leasing land do not have to pay the upfront cost of land, which reduces the entry barrier for developers. Leasing has been used to facilitate housing associations in Amsterdam by making land available at lower ground rents. Large increases in lease payments on renewable of leases became a source of dissatisfaction. Dutch cities thus moved away from leasing in recent years, but it is argued by the OCED (2017) that in doing so they have on balance turned away from a useful policy instrument for land value capture and active land management. As noted by the OECD, the issue of large increases in lease payments could have been addressed through more regular revaluations.

5.5 Implications for Ireland

The potential implications for Ireland of the international experience described here and in the accompanying Secretariat paper, *Land Value Capture and Urban Public Transport* are discussed in the NESC Report, *Urban Development Land, Housing and Infrastructure: Fixing Ireland's Broken System*, NESC Report Number 145. This report makes recommendations on the reform of Ireland's system of urban development, land management and housing provision. The issues addressed in this report include the treatment of public and private land, housing affordability, urban development institutions and ways of recovering costs of infrastructure investment from increases in land value.

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