JRF JOSEPH ROWNTREE FOUNDATION

REPORT

INTERNATIONAL REVIEW OF LAND SUPPLY AND PLANNING SYSTEMS

Sarah Monk, Christine Whitehead, Gemma Burgess and Connie Tang

Land supply is a key issue contributing to housing market volatility and problems of housing affordability in the UK. This research explores whether policies and mechanisms that work well in other countries might be introduced or adapted to help unlock land supply and therefore new housing delivery here.

This report:

- Analyses residential land supply systems in countries which may have successful measures or policies for bringing land forward for housing
- Sets out a typology of the different planning and land supply regimes
- Identifies which measures are central to success in other countries
- Considers which approaches might be adapted and implemented in the UK

MARCH 2013
WWW.JRF.ORG.UK

INSPIRING SOCIAL CHANGE

CONTENTS

List of tables

List of figures

EXECUTIVE SUMMARY

Introduction

The JRF Housing Market Taskforce identified land supply as a key issue contributing to housing market volatility and housing affordability problems in England[1]. It therefore commissioned this research to establish whether experiences in other countries can contribute to our understanding of the constraints on land supply in England and whether mechanisms that work in other countries might be introduced to help unlock new housing supply here.

Why land supply is a vital issue

Despite record house prices in the early 2000s the supply of new homes did not increase significantly. This lack of responsiveness to increases in house prices contributes further to affordability problems. The global financial crisis and resultant recession has only worsened the supply situation. The consequences of housing market volatility and shortage are increasingly serious so a review of planning systems and land supply issues is timely.

Current policy and practice

The coalition government has introduced a range of policies that aim to help achieve sustainable growth and address housing supply issues. These include the Localism Act (2011), the Plan for Growth (2011) and the new National Planning Policy Framework (2012). Individual measures include:

- A strong presumption in favour of sustainable development
- A New Homes Bonus
- Decisions on all planning applications within 12 months
- Fast tracking of major infrastructure projects
- Duty to cooperate with adjacent authorities and other public bodies
- Neighbourhood planning
- Land auctions and green belt swaps

How much land do we need?

Currently green belts cover some 13 per cent of the total land area of England yet urban land covers only around 10 per cent. The Planning minister has recently stated that increasing this to just 12 per cent would meet all identified future requirements and that this could be done while preserving green belts.

Methods

The research included a data and literature search for potential case studies. Once the eleven countries were selected, country experts were identified to provide advice on further reading and to comment on the emerging findings. A round table discussion was held to test how far the findings might be replicable in the English context.

The problem: perceived constraints on land supply

In England the perceived constraints on the supply of land include a lack of incentives for local authorities to support new development; the nature of the house-building industry; and existing disincentives to make land available in the light of future price increases. The mechanisms for funding and providing the necessary infrastructure can act as a constraint, as can the availability and cost of finance of development. There are particular risks associated with the re-use of land as compared with greenfield sites with respect to fragmentation of ownership, risks and costs. Market volatility further increases risks and uncertainty.

A typology of approaches to land supply

The planning systems and land supply practices in the eleven case study countries were analysed in different ways. First the perceived level and form of planning constraint was evaluated. A typology was then developed, taking account of the type of planning system, development controls, proactive involvement in the land market, taxation and subsidies, direct provision of land or housing by government, policies to provide affordable housing for low income households and mechanisms to mitigate the negative impact of controls. Also included were the decision-making levels and the scale of the local decision making authority. Finally, the responsiveness of housing supply to changes in demand, as measured by the elasticity of supply with respect to prices, was examined.

There are many differences but also many similarities between countries. Only England comes from a purely planning-permission background, although South Korea is moving in this direction. All the others use zoning with varying degrees of discretion.

Almost all countries face growth pressures in desirable areas and in most cases there are constraints to curb urban sprawl and protect agricultural land. But by no means all countries saw planning as a constraint.

Most countries have fairly low price elasticities of supply. OECD data show that the Great Britain (not England) figure is very similar to France and Germany while higher than the Netherlands. However, several countries were significantly more responsive, including Australia, New Zealand, Ireland and Denmark.

Findings

Most countries have three layers of governance for land use planning, namely national, regional and local. England, outside London, is alone in having no regional strategic layer. The number of local authorities varies enormously: in France there are 22 regions, 100 departments and 3,600

communes. In contrast England now has no regional layer and 336 local planning authorities. Smaller local decision-making areas are thought to help community involvement.

Looking to particular instruments we identified five main themes:

Growth management

Growth management boundaries/urban growth limits are used by most countries to prevent urban sprawl. To ensure price stability, the limit is normally revisited at regular intervals, but urban containment inherently affects land prices both within and outside the limit. There are some examples of successful urban containment and relative price stability over time, notably Portland, Oregon, but successful management requires planners to be pro-active in monitoring and adjusting land supply.

Land assembly

In many countries local authorities play an active role in land assembly, often using compulsory purchase powers. In Germany in order to redevelop areas with fragmented ownership, the municipality assembles the land so that the increase in value following development is shared proportionately among the original landowners after repaying the municipality for any necessary infrastructure provision. In the Netherlands, local authorities have traditionally purchased land at existing use value, provided infrastructure and sold it to developers at a price that at least recovered costs.

Infrastructure provision

Several countries have mechanisms to ensure that infrastructure is in place prior to planned development. France has a tax on employment in larger towns and cities which is hypothecated to transport infrastructure. Early infrastructure provision takes place in the Netherlands through municipal land purchase and sale. Land readjustment processes also provide for infrastructure.

Compensation and incentives

Most compensation and incentive mechanisms are in the form of increased benefits to local authorities. In Switzerland the cantons retain the tax revenues that accrue to new development and since this is their main source of revenue it acts as an incentive for further development.

Tax increment financing (TIF) – which depends on hypothecating future local tax revenues – has been used extensively in the USA to incentivise inner city regeneration schemes.

Density bonuses are used in a number of countries to compensate developers for potential loss of income from providing affordable housing on site. In the Netherlands there is provision for compensation to individuals by local authorities but it is not widely used.

Land value capture

Underpinning many of these mechanisms are forms of land value capture (in zoning systems) or planning gain in the English context. It includes infrastructure charges, inclusionary zoning to provide affordable housing, and land value taxation. Infrastructure and services provided by local authorities can often be funded from the increase in land values associated with development. However, it works best in periods of economic growth and becomes difficult when land values are falling.

Implications for England

Most of the mechanisms identified in this review have their equivalent in England. The question is more whether they could be used more widely or brought together more effectively and on a sufficient scale to ensure a larger and more regular flow of land to meet current and future housing needs.

From the review and Roundtable discussion three interlinked core areas where international evidence is of particular value were identified:

- How to provide sufficient incentives to bring land forward for housing
- How to enable growth without generating inefficient urban sprawl, and
- How to provide the necessary infrastructure to support new housing development

Incentives to bring land forward

Measures that help stabilise expectations about future land prices would change both landowner and developer behaviour. Land assembly and land readjustment (including compulsory purchase) are powerful tools to enable larger development.

Incentives to enable development work better where the municipality retains local taxes and they are spent on local services – and possibly where the municipality is small enough for the community to appreciate the benefits of growth.

In England neighbourhood planning, with community buy-in and the New Homes Bonus, may help to incentivise development, as may the strategic use of public land.

Growth management

The green belt has successfully prevented urban sprawl – but at a price. Evidence from other countries suggests that it should be operated more flexibly, with boundaries revisited regularly. Planners should monitor land supply and respond to price changes by adjusting potential supply.

Infrastructure provision

Provision of infrastructure in advance of, or alongside, development is essential. Funding can come from land value uplift, taxation, including additional tax revenues from new development, and debt finance paid for from a growing tax base.

A rolling infrastructure fund has clear potential, provided an initial source is available and the returns are recycled for further infrastructure investment. It can also be used counter-cyclically, enabling development to go ahead in the downturn and be repaid when the market improves.

Cambridge provides a case study of how to bring these different elements together pro-actively. While other areas may find it difficult to follow, it is also proof that attitudes and incentives can change.

Note

1 The research focused on England but many of the findings are relevant for the UK.

1 INTRODUCTION

The JRF Housing Market Taskforce identified land supply as a key issue contributing to housing market volatility and problems of housing affordability in the UK. It therefore commissioned this research to establish whether experience in other countries can contribute to our understanding of the constraints on land supply in the UK and whether policies that work well in other countries might be introduced or adapted to help unlock new housing supply here.

The aim of the research was to assess which policy approaches to land markets in other countries are most likely to work in the English context. In particular:

- What measures appear effective in other countries in bringing more land forward for residential development?
- What measures help to stabilise supply over the economic cycle?
- How is the uplift in land values from planning permission better captured for public benefit?
- How does the planning system together with local government financing arrangements support such approaches?
- What other aspects of the land market help to ensure land supply for housing?

Housing market volatility is not just a recent phenomenon. Over the longer term, response to house price increases has declined. Figure 1 which gives total housing completions annually since 1969 shows that each peak has been lower than the previous peaks since the 1970s. Moreover during the long period of economic growth in the 1990s new housebuilding remained fairly static, rising only slowly in the 2000s until a sharp fall in 2007–8 with a small recovery from a very low base in 2011–12. As a result, since the turn of the century, output has not kept pace with the growth in the number of households.

Recent experience of the housing market in the UK has highlighted both price volatility and poor supply responsiveness. During the 2000s, until 2008,

Figure 1: New housing completions, England

Source: DCLG live tables, various years

house and land prices were rising at unprecedented rates and affordability had become an urgent problem. Many people who would previously have expected to be able to buy a home were unable to do so, while rents in the private sector were also rising rapidly. Following the global financial crisis at the end of 2007, the land and housing markets collapsed as developers' asset values fell and banks were unable to provide finance either to developers or to those wanting to buy homes. House prices fell initially but not to a level that would reposition the market and recently they have crept up again. What is just as important is that the number of transactions halved and the requirement for large deposits meant that first time buyers were increasingly unable to access the housing market.

JRF's recent work on tackling housing market volatility noted that land owners can be reluctant to sell at cyclical low land values, preferring to wait for prices to increase (Stephens, 2011). Burgess *et al.* (2011) suggest that land prices may not return to their cyclical peaks but it will take time for land owners to adjust their expectations. Meanwhile land supply will continue to be problematic. A number of features of the British system exacerbate this problem, notably developers' reluctance to push local prices down and local authorities' need for a certain price to enable contributions towards necessary infrastructure. This can mean that holding on to land until prices rise is more profitable than developing it. However, cost is only part of the equation and other commentators have argued for a more fundamental reform of land supply (Barlow *et al.*, 2002; Barker, 2006).

How much extra land do we need?

The Office for National Statistics (Pointer, 2005) used census data to estimate that urban land represents about nine per cent of the UK's total land area in 2001. More recently, a satellite imaging exercise conducted for Defra (NEA, 2011) generated a figure of 10.6 per cent for England. Both of these studies measured continuous urban areas, rather than all land that has been built on. The government currently states that all housing needs could be met if another three per cent were to be developed, so that urban land

totalled 12 per cent. This compares with almost 13 per cent of the total land area that is green belt, protected by the planning system to prevent urban sprawl, bearing in mind that green belt land includes some built-up areas and infrastructure (House of Commons Library, 2012), It could therefore be argued that even if we were to use significantly more land for homes, there would only be a limited impact on the countryside.

The policy and practice relevance of this research are extremely important. Land is essential for the supply of new homes so finding ways to bring more land forward for development is key to producing additional housing. Ways of preventing land prices from rising dramatically during booms (and falling equally dramatically during downturns) would also help to address problems of stability of supply and housing affordability. Equally, ways of capturing planning gain and providing necessary infrastructure are core to longer term success in expanding supply.

An international review is particularly relevant at this time because of the large number of changes being put in place by central government in the UK which offer the potential for introducing greater responsiveness – including the National Planning Policy Framework with greater emphasis on the right to develop in line with local plans; the Localism Act which shifts the emphasis towards local conditions and incentives; a new local government finance regime; the introduction of the New Homes Bonus and many other policies specifically aimed at expanding supply.

2 COUNTRY SELECTION

The study involved examining a range of countries with different attributes. These included those with approaches believed to work well in terms of housing delivery but also countries that faced similar problems of land supply. They were also representative of Europe, including Eastern Europe, Asia, the USA and Australasia. This section summarises the main attributes of the eleven countries finally selected for detailed study.

The eleven countries finally selected either had similar contexts to England or interesting and relevant policy instruments, or both.

1 Australia

Australia has a low population density and plenty of space, but much of this space is uninhabitable and the vast majority of the population live in and around the five main cities. In the past, house prices have remained stable in real terms as the cities expanded into low density suburbs, although they suffered from price volatility particularly related to variations in the flow of migrants. Land was released relatively freely by local governments especially at the margin of cities. More recently, cities such as Melbourne have introduced urban growth boundaries to prevent further urban sprawl. More generally, since the turn of the century housing output has not kept pace with household formation in more buoyant cities. House prices have risen steeply and affordability of housing is an increasing problem. To address affordability problems several states have introduced schemes whereby developers contribute to affordable housing delivery, sometimes in return for higher densities and hence more profitable development.

In Sydney there has also been increased emphasis on eliminating debt and reduced spending on infrastructure by increased use of brownfield and infill

sites within the city boundaries. Land that is released beyond this comprises smaller plots than in the past, again with a view to a more efficient use of land.

2 Czech Republic

The Czech Republic introduced their current planning system with the aid of EU appointed 'experts' who advised on local plans. The resultant zoning system is legally binding but in practice it is not always enforced. There is an increasing emphasis on local delivery in terms of implementation and there are concerns about urban sprawl in some areas, notably around Prague.

3 Denmark

Denmark has similar population density to the UK. It reflects a Scandinavian social democratic approach to regulation, and to the provision of social housing often on public land. Denmark also has land value taxation, although recently there have been political pressures to reduce the tax take. Land value taxation is seen as a means of taxing land without distorting the land market or the decision making process in relation to how land is used or developed.

4 France

France has large scale municipal land assembly, and has used the land readjustment mechanism or 'pooling' described in previous JRF reports but on a voluntary basis, as compared to Germany where land readjustment is a legally binding mechanism. Large sites are brought together with an infrastructure plan to ensure that the necessary services are in place ahead of time. There is also a national employment tax which is hypothecated on financing transport infrastructure provision.

5 Germany

Germany has been using land readjustment or 'pooling' for many decades to enable the costs of infrastructure to be shared by all the landowners and the municipality in regeneration schemes. The municipality decides the boundary of the scheme, the rights and claims of all plots within the area are established and added together, then land for public uses such as streets and public space is appropriated from the total land area. The remaining private property will be returned to all owners according to their share of the original value or land area. If it is divided according to value, the landowner has to pay the uplift in value to the municipality, which enables the latter to recoup the costs of infrastructure etc. If it is according to original plots, the municipality retains the increase in value up to 30 per cent on greenfield land and 10 per cent in the inner city.

6 Netherlands

The Netherlands has a virtually identical population density to England and scarce land. For many years it operated a land supply system whereby the local authority purchased agricultural land, serviced it and parcelled it into smaller plots and sold it to developers at a price that covered the infrastructure costs. This kept house prices stable over time, but more recently house prices have risen steeply and local governments have found that when they come to buy agricultural land, developers have got there first and already bought it. This seems similar to the UK where in the light of the large uplift in land values created by planning permission, land owners have sold land on options which enable them to share in the uplift in values. It will be interesting to look at the mechanisms which appear to be emerging to combat housing affordability in this context.

7 New Zealand

Population density is low compared to England but New Zealand is experiencing pressures on urban growth and as a result Auckland has introduced what was originally termed a metropolitan limit but has now changed to Rural Urban Boundary. This is being closely monitored, and as no other city in the country has introduced one, there is an opportunity for comparisons to be made over time.

8 Republic of Ireland

Ireland's planning system was originally based on that in the UK and despite zoning the degree of discretion at local level remains similar. Unlike the UK, it experienced high levels of housing output outside central urban areas in response to rising house prices up until the global financial crisis. In part land release was the outcome of competition between authorities for population. The crisis and resultant recession has resulted in mothballing of estates especially those located far from appropriate transport and infrastructure.

9 South Korea

South Korea has a slightly higher population density than England. It introduced a green belt policy, based on the UK, around Seoul and 14 other large and medium sized cities in 1971 in order to curb urban sprawl resulting from the continuing migration of population from the rural areas. In the late 1990s the greenbelt was removed from seven cities where population pressure had declined, and now only the green belt around Seoul remains. At the same time there was a move away from zoning to a planning permission approach. Of all Asian countries it has the most obvious relevance to the UK. The cultural and political pressures have been very different, however, making it easier to relax the green belt constraints.

10 Switzerland

Switzerland has often been held up as having stable house prices and a better balance between population growth and housing growth. The

planning system is highly localised at canton level, although recently small cantons have been combining. Cantons in Geneva and Lausanne in particular restrict additional development and smaller units. Others look to support development. This is in part because municipal finances are predominantly locally based, so that the community benefits from the additional tax revenue resulting from new development

11 USA

Initially it was proposed to select two or three states from the USA as they all have different planning systems. The suggested possibilities were California, New Jersey, Oregon and Pennsylvania, but much of the literature covers examples of mechanisms from across the country, so it was decided that the USA should remain in the study and that New Jersey should be investigated in more detail.

New Jersey

New Jersey has a population density slightly higher than England. It has had growth control policies since 1979 when the aim was to protect the Pinelands National Reserve. The New Jersey Pineland Commission has developed numerous land use policies to protect these 'pine barrens' which include one of the cleanest aquifers in the USA and which are described as covering an oasis of one million acres in the nation's most densely populated state. The Pinelands reserve is located to the west of Atlantic City in the south of the state, towards Delaware. It has been extremely effective in preventing urban development within its boundary, clearly visible on maps or using Google Earth.

New Jersey also has rapid rail transit connections to central Manhattan and acts as a commuter belt for New York. Its urban conglomeration covers the area across the Hudson river including Jersey City and Newark. Many cities and counties within the state have also introduced constraints aimed at limiting the extent or the pace of new development and encouraging 'smart growth' by building at higher densities.

Further details of research methods and country selection are given in the Appendix.

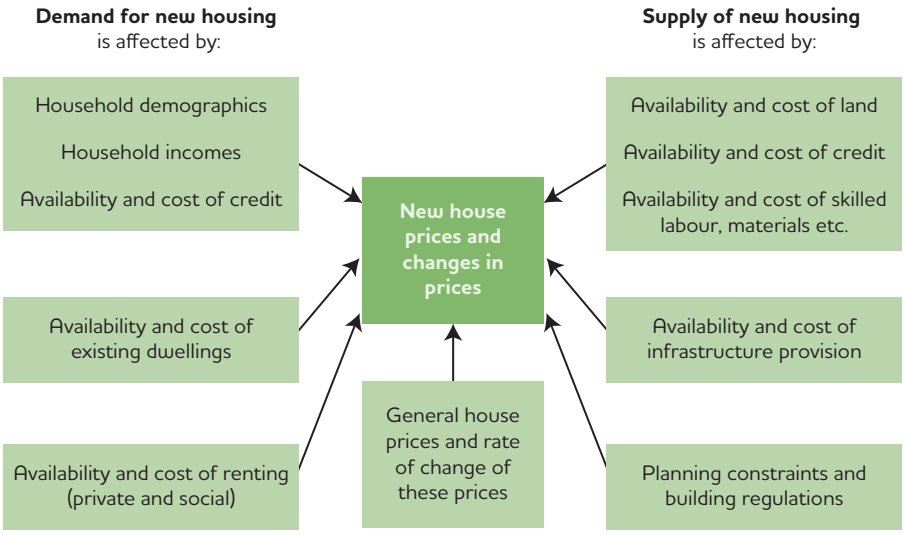
3 ISSUES WITH RESPECT TO LAND SUPPLY

The housebuilding market may be conceptualised in terms of supply and demand for new housing, with land supply as one of the necessary inputs to provision alongside finance, construction materials, technology and labour. Depending on the nature of land and infrastructure, the working of the market and governmental involvement, land may be constrained or readily available and equally it may be used intensively or extensively. As a result prices and accessibility to land may be lower or higher depending on physical, economic and financial aspects as well as regulatory, taxation and property rights arrangements.

Such a model takes demand for new housing by households on the one hand (determined by income, demographics, credit availability and prices) and supply of new housing by the development industry on the other (determined by house prices and house price changes, land supply and land prices, credit availability and cost, planning, skilled labour, materials, infrastructure, and so on). There have been sufficient models of demand for some agreement to emerge. The main evidence base on supply comes from American studies. There has been less work on supply in the English context, partly through lack of robust data. Figure 2 sets out the key variables in the model.

The relationship between the housing and land markets treats land as a factor of production which will be used in combination with other factors and available technologies to generate different types of dwelling and different

Figure 2: A model of supply and demand for new housing



densities of development. Price and availability of land, alternative uses and building regulations will all impact on the decisions made by developers.

The nature of land and housing means that in one sense monopolistic behaviour is inherent in the industry. It is fixed in space so each plot or house is unique, yet they each act as close substitutes to one another. Equally, what is profitable to provide depends on demand; housing is durable and expensive so cannot be bought out of income, and as a result there are different ways of accessing housing, for example through renting or debt financed owner-occupation.

Looking at the UK context, a number of particular issues have been identified.

First, developers respond to changes in the economic determinants of supply of land in different ways, making analysis increasingly complex. Ball *et al.* (2010) find that supply is more responsive to price changes than to levels, and that large firms are more responsive than small ones (by increasing their output). This fits with studies of housebuilder behaviour (see Monk's 1991 review of the speculative housebuilder) in which small housebuilders simply aim to repeat what worked in previous years rather than directly responding to changes in prices.

Second, many commentators argue that the land supply problem is as much about speculation and rent seeking as part of the business models that housebuilders use given the specific institutional and planning framework that operates in the UK (Callcutt, 2007).

In this context, there is little evidence that the use of options/land banking creates barriers to new entry into the market. Once land is acquired, however, competition is reduced. Limited land supply means that competition may focus on land acquisition rather than consumers. Profitability depends on obtaining valuable land rather than building a high quality product in the most efficient way (Barker, 2003).

The Barker Review of Land Supply (2003) found that the behaviour of the housebuilding industry was partly a product of the policy environment. There are two types of risk – market risk arising from price volatility and site-specific risk associated with land acquisition, planning permission and the construction process. This makes developers reluctant to make long-term commitments. They reduce risk by outsourcing, using retained profits as finance instead of debt or equity, and option contracts to acquire land. Risk aversion, however, also results in low investment in brownfield

development, a low rate of innovation, and a lack of responsiveness to house price increases (which is also asymmetric – the industry reduces output very quickly and dramatically in the downturn, but then takes a long time to recover in the upturn).

Perceived constraints in the UK

The literature examines a range of issues relating to the determinants of land supply and how that land gets translated into new housing. These include a lack of incentives to local authorities to support new development, the nature of the housebuilding industry in the UK, other (non-planning) constraints on land, the nature of the main actors in the land market, mechanisms for funding and providing infrastructure, the availability and cost of finance, the risks associated with the re-use of land and market volatility. These are explored briefly below.

Incentives for local authorities to support development

Local authorities in the UK have very little incentive to support new development. In pressured areas, new housing supply means additional households with accompanying needs for education, health, social and community services, all of which may already be at or near capacity. Additional households may be expected to add to traffic congestion and exacerbate pollution and environmental problems. Police, fire and ambulance services will be more stretched, while the infrastructure in terms of water supply, waste disposal, transport, roads and energy may not be sufficient to meet increased needs.

The nature of the housebuilding industry

Housebuilding in the UK is generally speculative and therefore risky. Nevertheless the profits from development can be very large. The industry is dominated by a small number of very large national firms, a larger number of medium sized regionally-based firms, and a large number of very small firms working locally and switching between new build, conversions and repairs and maintenance. Housebuilding is also highly regulated, with national policies implemented at local level. Because developers believe that the maximum sales rate for new homes is only 30 a week in any one locality, they are reluctant to increase build out rates on a site for fear of pushing down prices (Adams and Leishman, 2008). On the other hand the capital tied up in the building process is large, so there is an incentive to complete a scheme as quickly as possible. A lack of potential buyers, both actual and perceived, causes the build-out rate to slow down.

Other constraints on land

The Callcutt Review (2007) found that there are two main types of land; strategic or long-term land and 'oven-ready' land that is ripe for development. Strategic land is desirable from the point of view of local authorities because the developer does all the work. Large oven-ready sites are often broken up and sold to other developers, which increases build-out rates. There is a limit to how many different developers can actually operate on a site at the same time, however, which reduces build-out rates.

The time taken to assemble land is a further constraint, especially in brownfield development where sites may be small and require assembly to a large enough scale for the redevelopment to be viable. This includes 'internalising the externalities' whereby a blighted area will only realise an

uplift in value if the entire area is regenerated and land assembly in such circumstances can take years. So-called 'ransom sites' can be a problem where one landowner refuses to sell until the price is right. The attitude of the local authority may make a difference in land assembly, as if it is pro-development owners will be keener to sell.

Main actors in the land market

The Callcutt Review also found that housebuilders are not the main actors in the residential land market. According to figures from Savills, only eight per cent of land suitable for housing development is owned by housebuilders. Commercial and mixed developers own around 25 per cent of suitable land and 67 per cent is owned by 'other' landowners, including the public sector. The emphasis on brownfield sites has brought new actors into the housing land market – for example, the recent proposal for an 'eco-town' in Cambridgeshire came from a partnership between Tesco and the Wellcome Trust. Different owners will have different motives to release or hold onto land, making land assembly for large schemes complex and time consuming, particularly in regeneration.

Mechanisms for funding and providing infrastructure

The lack of incentives to local authorities and the perceived burden of the need for additional service and infrastructure provision implies a need for additional funding. In the UK there are several non-planning mechanisms for funding and providing infrastructure, most notably the use of private finance and public–private partnerships (PPPs). These take time to develop, however, and are usually only relevant for particular large scale schemes. For example, the Emirates Stadium development in London involved three thousand separate deals (Huxley, 2010).

The availability and cost of finance

Housing in the UK tends to be debt-financed with relatively few off-plan sales. The cost of finance is always a problem even in smaller scale development. Following the global financial crisis, both housebuilders and housing associations were facing credit constraints despite interest rates remaining historically low. The severity of credit constraint appears to have lessened, but uncertainty remains. Land held on option is an option to build which the developer can turn down on grounds of financial viability, including lack of finance.

The risks associated with the re-use of land

While speculative housebuilding is itself inherently risky, there are additional risks associated with the reuse of brownfield land. These include potential contamination and health risks for ex-industrial land. Brownfield land may be derelict land, which can only be developed after the removal of chemicals, waste or derelict infrastructure, or addressing instability problems.

Market volatility

Market volatility, or a cycle of booms and slumps, means that decisions made at one point in time may turn out to be wrong when the market changes. While a lack of responsiveness to price signals can increase market volatility, it is also the case that having to determine the entire value of a project at the start and pay a range of costs up front is highly risky if there is no mechanism for revision when the market turns further along the development process.

Summary

This review of constraints in the UK system points to the attributes that should be taken into account when examining instruments and experience in other countries. These include:

- Governance and the level of decision making with respect to planning decisions
- The incentives faced by planning decision makers
- The main sources of land – brownfield/greenfield; from public or private owners and so on
- The ways in which infrastructure is provided
- Who pays for that infrastructure and how
- The organisation of the housebuilding industry and its capacity to obtain land;
- The degree to which housebuilding is speculative or sold 'off plan' or to order

So, tackling the slow responsiveness to house price rises in the UK requires more than just looking at the planning system. It involves understanding the way that the construction industry is financed in the UK, and the means by which infrastructure is provided and the incentives that landowners have to supply land to the market.

4 TYPOLOGY OF APPROACHES TO LAND SUPPLY

Here we set out the main attributes and instruments to be found in the selected countries as well as perceptions about the extent of constraint imposed by planning and other regulations. In some case, where shortages are identified, it is simply because of market pressures in high demand areas – planning systems in these situations address issues of externality but, at least in principle, do not lead to land availability constraints that are justified on efficiency grounds. In other countries there is a perception of NIMBYism in areas of high demand; in still others, constraints are seen to be more general.

Planning systems

All the countries selected have plans and all except the UK have zoning systems. Zoning regulations set out in detail what types of development should be built in each zone and are usually legally binding. In practice, however, there is some discretion to adjust within the zone, such as allowing higher densities, although this varies widely across countries. There are also differing arrangements for updating or rezoning. The UK approach is more discretionary at local authority level, provided the proposed development accords with the plan and is acceptable in planning terms. The National Planning Policy Framework provides the overall context for local plans, and thus in practice the degree of discretion is constrained. Table 1 provides a typology of the planning systems of the selected countries in the context of a continuum from considerable discretion to very little discretion.

Table 1: Typology of planning systems in terms of strength

Discretionary	Zoning with more discretion	Zoning with less discretion
UK	Australia	Germany
	France	New Zealand
	Denmark	Switzerland
	Netherlands	South Korea
	Republic of Ireland	USA
		(Czech Republic)

Note: The Czech Republic has a relatively strict zoning system on paper, but in practice it is not well enforced.

Land shortages

Table 2 classifies countries according to the perception (provided by our country experts) of land shortages. In most countries land shortages occur in pressured areas, such as growing cities or otherwise desirable places to live. Only the Netherlands and the UK perceive shortages almost everywhere. In the Czech Republic, there is currently seen to be no shortage of land or housing. In Ireland there is a perception of surplus land and a reality of surplus housing in many areas, in part because of the global financial crisis. South Korea has been highly successful in meeting the housing demands of rural to urban migration within its growth boundaries, so much so that it is perceived today to have too much land as the rate of migration has levelled off.

Australia and New Zealand have land for development (although not in the core of the major cities) and problems of housing affordability. In Switzerland the decentralised system means that in most areas there are incentives to provide additional housing – and competition to accommodate households. There are shortages in some high-valued areas, however. In some areas, pressured communes are trying to meet housing demand by increasing densities within the urban area, which is also true of South Korea (in a centrally planned context) and indeed many growing cities and city regions across most of the case studies.

All countries have planning systems which have the objectives of limiting negative externalities while supporting the development of positive ones and sometimes for distributional reasons to ensure fairness to different groups. In all except two (Czech Republic and Republic of Ireland) regulations are enforced, often with the intention of controlling urban sprawl.

Table 2: Planning constraints as perceived as generating land shortages

Overall land shortage	Shortages in pressured areas	No shortages of land
Netherlands	Australia	Czech Republic
UK	Denmark	Irish Republic
	France	South Korea
	Germany	
	New Zealand	
	Switzerland	
	USA	

Table 3 classifies the selected countries according to the following characteristics:

- Type of planning system
- Regulation to constrain provision – negative controls on development
- Regulation to increase provision – proactive involvement in land market
- Taxation – taxation likely to increase costs of development unless passed back to landowner or on to home purchaser
- Subsidies – incentives to local governments, developers, other stakeholders
- Direct provision – of government-owned land or of housing
- Policies to provide affordable housing for households with a low income
- Mechanisms to mitigate the negative impacts of controls

Another aspect of importance is the nature of the governance, the level at which decisions take place and the scale of the authority that makes the final decisions which impacts on the capacity to offset negative impacts on the community. England is again unusual in not having a regional strategic authority outside the Greater London Authority area. The figure therefore includes:

- Decision-making levels
- The key level for development
- The size of the authority.

Finally there is the issue of the extent to which in each market supply actually responds to prices – which is itself affected by the constraints provided by planning and other regulatory constraints. The final row of the table therefore covers the responsiveness of new supply to increases in price, as measured by the average housing supply elasticity at the national level estimated by the OECD (Andrews *et al*., 2011).

Summary

It is clear that there are many differences but also many similarities between the countries, making it difficult to generalise. Only the UK comes from a purely planning permission approach, although South Korea is moving in this direction from a strict zoning system. All the others have zoning with varying degrees of discretion once the zone has been fixed and similarly varying ability to alter the zoning regulations which are usually formally legally binding. In these contexts building regulations may be as important as development control in generating flexibility.

Almost everywhere faces growth pressures in desirable areas and in most cases there are constraints to curb urban sprawl.

The nature of governance is clearly important, along with the level at which planning decisions are made and the scale of the authority which impacts on political will and the capacity to compensate the community for any loss of amenity.

It is interesting that most countries have fairly low price elasticities of supply (the responsiveness of new supply to increases in price, as measured by the average housing supply elasticity at the national level estimated by the OECD (Andrews *et al*., 2011b)). In Great Britain it is about 0.4, higher than France and just below Germany. It is lowest in the Netherlands, perhaps not surprisingly given its land constraints (although these are no greater than Southern England), and highest in the USA. Several countries are significantly more responsive than the UK, however, including New Zealand, Australia, Ireland and Denmark.

Table 3: Typology of land use regulation and planning systems

Regulatory instruments	Australia	Czech Republic	Denmark	France	Germany	Netherlands	New Zealand	Republic of Ireland	South Korea	Switzerland	USA
Type of planning system		Zoning but not strongly enforced	Zoning	Zoning	Zoning	Zoning	Zoning	Zoning (but not strongly enforced)	Zoning	Zoning	Zoning
Regulation to constrain provision	UGB for main cities	Some areas near Prague stopped land release	Finger plan Copenhagen	Urban growth limits in pressured areas	Urban growth limits in pressured areas	Urban growth limits	MUL Auckland	Dublin	UGB, Green belt	Green belts around cities	UGBs, USAs', green belts
Strength of constraints	Medium	Strong on paper	Strong	Medium	Medium	Strong	Strong	Medium	Strong	Plan is legally binding	Varies
Regulation to increase provision		Some areas encourage new building		Proactive in land market	Proactive in land market	Proactive in land market	Auckland proactive in land market	Entrepreneurial approach to planning	Modest land release	Designated Building Areas	Housing land trusts
Compulsory purchase				If voluntary agreement fails	If voluntary agreement fails	To facilitate land assembly					Eminent domain to address blight
Taxation	Development contributions	Mortgage interest tax relief	A form of land value taxation	Hypothecated tax for infrastructure			Land value taxation	Developer contributions for infrastructure	Taxation to discourage growth in Seoul	Local taxes act as an incentive to development	
Subsidies	Federal subsidy to low income rental	Interest subsidies to mortgage loans	Direct and indirect subsidies	Direct subsidies to housebuilding	Only for low income households	Subsidies on regeneration sites			Tax breaks encourage growth elsewhere		Federal and local subsidies
Affordable housing	In SA and pilot in NSW				Loans, subsidies and cheap land for housing	Land use plan can include land for social housing		Planning gain legislation (Part V)			Inclusionary zoning
Other mechanisms	Density bonuses				Land re-adjustment; circular land management	Compensation to individuals	Financial and development contributions, density bonuses	Increased residential densities		Land Improvement Syndicates to prevent land hoarding	Impact fees, TIF, density bonuses
Decision-making levels	State and local	State, region, local	National, regional, local	Regional, intercommune and commune	National, State, region, local	National, regional, local	National, regional, local	National, regional, local	National, local	Federal, canton, commune	State and local
Key level	Local	Local	Top down	Local	Local	Local but also national	National and local	Local	Local	Local	Local
Size of local unit	Varies	Small	Large (271 merged into 98)	Very small but can combine (36,000)	Small (14,000)	Medium (city and district)	Medium (city and district)	Medium (city and district)	Large (city)	Very small but can combine	City and county
Supply elasticity	0.5	n/a	1.3	0.3	0.43	0.15	0.7	0.6	n/a	0.15	2.0

5 FINDINGS

This section presents the main findings of the review and the roundtable discussion. First we present findings about land supply issues and governance as these set the framework for implementation. This is followed by more detailed discussion of particular mechanisms found to work in different countries to address issues around the effective provision of land for housing. In each case, the potential for use in the UK is addressed.

Commentators from some countries suggested that overall there was plentiful land supply and sometimes too much was available. Others perceived that there was not. All countries studied had perceived shortages of land in some areas. Most had regional economic imbalances, with policies expressly designed to address these. Some saw these as successful and others felt that the imbalances were long term.

In order to make more efficient use of scarce land, most countries have policies to re-use brownfield land. This is important because brownfield land is usually more expensive to develop than greenfield. It requires clearance and, in some cases, decontamination before it can be used. The emphasis varies between countries and is often associated with proactive policies of regeneration. England probably has the strongest emphasis on brownfield but now has fewer means of supporting regeneration.

At the same time, all countries had policies to prevent or reduce urban sprawl and to protect agricultural land or land with amenity value. The key issues in this respect are the strength of those constraints and how far the effects of regulation to constrain provision for positive reasons can be offset by policies to enable more appropriate land to be developed.

The review found a number of mechanisms used to address these conflicting demands: the need to ensure sufficient land for housing a growing population and the need to mitigate the negative impacts of that growth. They are grouped under five general headings:

- growth management
- land assembly and land readjustment

- infrastructure provision
- compensation and taxation
- land value capture.

In practice they often overlap and countries that use one mechanism often also use others as part of the overall strategy. For example, most countries with policies to contain urban sprawl also use specific mechanisms or approaches to help mitigate adverse impacts. This may relate to more holistic and positive approaches to growth and development compared to England (and indeed the UK) where attitudes are often negative.

Governance

The level of governance is important and varies both between and within countries. All countries had planning systems that are based on democratic principles but different decisions are made at different levels. The UK's 1947 Town and Country Planning Act was one of the earliest formal systems and influenced many systems across the world, especially in the Commonwealth.

Most countries have three layers of governance with respect to land use planning: the national government which sets the policy context; regions which make strategic decisions on infrastructure, employment and investment in residential and other real estate; and local authorities that implement development controls and building regulations in line with local democracy. The UK outside London is alone in having no regional strategic layer and now relies purely on local planning authorities who take decisions within a national planning policy framework.

The size of local authorities and their relationship to regional and national government varies. For example, in France and Switzerland the local level is the commune, which is generally very small. In France, with a population of 62.7m, there are several tiers of government, national, 22 regions, 100 departments and 3,600 communes, while Switzerland with a population of only 7.6m, has a federal structure with 26 cantons and some 2,500 communes. This contrasts with England, with a population of 51.8m, where all the regions except London have been abolished and many local authorities have been amalgamated to form unitary authorities, leaving just 341 planning authorities (including the five National Parks). It has been strongly argued that smaller-scale municipalities might be better able to take decisions that meet the aspirations of local communities, whether these be for growth or conservation (see, for example, Evans and Hartwich, 2005). In England the localist agenda is seen as the main way forward, but involves the development of a completely new ethos especially through the duty to cooperate and neighbourhood planning strategies.

Implications for England

All the evidence suggests that democratically based planning systems particularly limit urban sprawl as a necessity. Most see the process as holistic in order to address not just the core objectives of ensuring land supply and organising development efficiently but to offset perverse incentives and the negative impacts of control as well as to address issues of equity, access to housing and ensuring adequate investment in infrastructure.

Two important aspects of governance are the need to ensure that decisions are made at the appropriate spatial level and that communities have a voice. In most countries this results in three (and sometimes even four) levels of governance. England's move towards localism is welcome as a means of improving local decisions and buy-in – but there must be concerns both

about the size of authorities and the way that new sub-authority powers will work and the capacity to cooperate effectively with other authorities.

Growth management

As already noted, most countries have policies to prevent urban sprawl and to protect agricultural and other land with special amenity value. Looking in more detail, some have several policies – urban growth boundaries, urban service areas, metropolitan urban limits – that differ in the detail but have similar aims and impacts. Most only cover large or fast growing cities. Some have green belts as well. In England the countryside is protected by a series of green belts which are swathes of protected land around major cities, rather than urban limits which draw a boundary to a city. This is partly because towns and cities in England are close to one another and planners wanted to ensure that they did not merge, but is mainly because the system of green belts was put in place before the formal structures of the 1947 Town and Country Planning Act came into being.

Urban growth boundaries have the effect of increasing the desirability of locations within the boundary and reducing options for those outside it. Therefore land and house prices will rise within the boundary, reflecting this desirability, relative to land outside it. This is different from a green belt, where land and housing within the belt may be more desirable than those either in the city or in the countryside beyond it. Green belts are not empty, they include towns and villages that existed before the green belt was drawn up.

Both urban boundaries and green belts thus have a price effect reflecting the policy's role in addressing negative external costs of development. Where the constraint is strong, this price effect will be large. It might be desirable to prevent urban sprawl without adverse effects on land and house prices, however the literature shows that it is not possible to eliminate the price effects of planning completely. Nor is it desirable – prices are an indicator of the relative value of scarce resources and as such those resources have to be paid for. What should be done is to ensure that sufficient development, of the right kind and in the right places, is possible while still ensuring that the social objectives of reducing sprawl and generating efficient compact cities are met. This is the only way to meet overall demand and so reduce price increases.

The most common approach in the countries studied is to undertake growth management alongside an urban limit. This is a dual policy of increasing densities and amenities including services within the urban boundary (compact cities) while reducing development outside it. For success in terms of house price stability in the face of rising demand, it cannot be total containment but requires revisiting the boundary, usually at regular, pre-determined intervals. A key aim of growth management is to ensure that infrastructure (roads, sewerage, and so on) is provided in the undeveloped countryside before the boundary is adjusted and development takes place.

Examples of successful growth management include Portland, Oregon where house prices have been relatively stable over long periods of time, and where an important goal of urban containment was to protect agricultural land as well as prevent unplanned development taking place in areas without proper infrastructure. Further examples can be found in Germany, where local authorities have worked together to ensure sufficient land for planned development while retaining urban boundaries and providing amenity in the form of green spaces. Auckland in New Zealand has a Metropolitan Urban

Limit which reflects joint working by local authorities to identify areas for redevelopment, intensification and infill within the city region. It will be replaced by a rural–urban boundary in 2013. All states in Australia have urban containment policies which have extended the urban areas over time, increasing the supply of urban land on the metropolitan fringes. At the same time within the five major Australian cities, a policy of consolidation has led to higher housing densities in the inner and middle ring localities.

South Korea introduced a strong green belt policy based on the UK until very recently. Around most major cities vast swathes of land widely used for recreation was protected from development, while within the city a programme of demolition of low density housing and its replacement with high density development was highly successful in providing homes for the massive inward migration of rural population to the urban area for employment. Recently this migration has fallen away, to the extent that more new housing has been produced than is required. As a result the green belt has been abolished in all major cities except Seoul and South Korea is now moving towards a more permission-based planning system, closer to that in England.

Potential for England

The evidence suggests that in some countries growth management can be successful in stabilising land and house prices provided it is not a permanent and inflexible constraint. In England there has been a strong green belt policy for 60 years, based on the assumption that growth would be allowed beyond the green belt boundary, that is, it would 'jump' to the other side of the green belt. Green belt boundaries could be revisited, either occasionally (which some authorities have done) or on a regular basis. However the overall scale of the green belt has, if anything, increased. One offsetting policy has been to increase densities within the urban area and many authorities have been pursuing this approach. 'Green belt land swaps', whereby brownfield land in the green belt is given permission for development but in return other more attractive land for leisure and other purposes would be added to the green belt, are currently being encouraged by government.

An important element of successful growth management has been adequate infrastructure provision in advance of growth together with a more positive attitude to growth. Some countries welcome growth, as do some local authorities in England – usually those in more depressed areas where growth might bring much wanted jobs as well as new homes. Others see growth as bringing costs that outweigh any perceived benefits, largely because of the lack of infrastructure and pressure on scarce services and facilities.

A longer term approach in England would be to revisit the green belt boundaries at regular intervals. This might involve 'shifting' the belt further away from the town it is protecting in areas where accessibility is good. New legislation is not required as councils can already change the boundaries.

Pros and cons

- Growth management that aims to contain urban sprawl and maintain the central areas of cities in ways that are compatible with house price stability is clearly an attractive proposition.
- However, the evidence is conflicting on how far this is possible over long periods of time and both the specifics of the growth management process itself and the nature of political control and local incentives may be critical.

Land assembly

In France, Germany, the Netherlands and in parts of the USA, Australia and New Zealand, local authorities play an active role in land assembly and land readjustment. This can be crucial in large-scale extensions and new towns as well as redevelopment or regeneration. It is often coupled with compulsory purchase powers, which are widely used in some countries, for example, Germany and France.

The standard approach to development in the Netherlands has been for the municipality to buy undeveloped land, provide the necessary infrastructure and services, parcel it into lots and sell them at prices that recover at least the costs involved. The sites are then developed by private companies, housing associations and individual owner-occupiers (self-build).

Germany has two main mechanisms for supporting development in constrained areas. One is land readjustment, used where ownership of land in an area is fragmented. It was originally aimed at rural smallholdings but today is used to address redevelopment of inner city areas and housing shortages. It can be a total reallocation of land to provide owners with plots suitable for building and the municipality with land for infrastructure, or a more limited adjustment of adjacent plot boundaries. It can be achieved either by voluntary arrangements or through compulsory purchase. It allows the municipality to influence the form of the development, recoup the costs of servicing and infrastructure, and possibly receive some of the net land value uplift, as well as reduce delays caused by a lack of infrastructure.

The second mechanism, circular land use management, was introduced in Germany in 2002 as a key policy to reduce land take and increase the efficiency of land use. It builds on the concept of a natural 'use cycle' of land, from the initial allocation of land for building, its development, use, abandonment, and finally to its reuse. The approach allows for zoning new land for development on a small scale in certain conditions. This strategy aims to reduce new development on greenfield sites and to reuse previously developed land (Preuß and Ferber, 2008). However, such an approach has required cooperation between the German Federal Government and other groups of stakeholders: the *Länder*, municipal and regional levels of government, private enterprise, institutions which own land, the real estate industry and private households – in order to establish the framework conditions for circular land use management.

In France there has been an increasing trend to using special development vehicles created by communes acting jointly to ensure that the desired development takes place. These have proved highly effective in bringing together the resources required to redevelop large zones, often post-industrial or with highly fragmented land ownership, although these have also required a great deal of subsidy and support from central government. They address cross boundary problems and have been recognised by the national government as a means of pro-active planning that can be assisted by making more publicly owned land available.

Potential for use in England

One issue in terms of land assembly is the operation of the land market in England. Increasingly land is sold to developers on options, legal contracts that require the developer to undertake due diligence to obtain planning permission. This will normally create a large uplift in value which is then shared between developer and landowner according to the contractual arrangements in the option. However, the system depends on expectations of rising values, and it is difficult to get landowners to take a cut when

expected values decline. Most landowners can afford to sit and wait until land values rise again, by which time the shortage of housing has increased, making their development even more valuable.

This is related to how land is identified and allocated for new development. For example, when Cambridge was selected as a growth area by central government, different developers presented six possible developments (urban extensions, new villages). The local authority selected one of these on the basis of sustainability, but not on the basis of monetary value. Those that were not selected then mainly waited for the next opportunity in ten or so years' time.

Other issues include the fact that the planning decision, and associated developer contributions, is made at a particular point in time and it is then final. Yet schemes take a long time to develop and meanwhile the economic context may have changed. There is a need both to take a long-term view and to allow flexibility about when payments are required. In Milton Keynes the public sector owned a small 'ransom strip' that provided access to some of the private land, and a decision was made not to ransom it by requiring the highest price, but to provide the land at a price that would enable the development to go ahead. This also helped to optimise the S106 agreement, as in the current market context developers are trying to renegotiate their contribution to community benefits such as affordable housing. The additional land helped the overall scheme's financial viability, including the developer contributions.

Especially in brownfield and regeneration sites there are major issues about land assembly – arising from fragmented land ownership and the prevalence of home ownership and buy-to-let among other factors. This can mean that it takes years or even decades to bring a site to development. Land readjustment and compulsory purchase could be used more effectively in England. However, authorities have been consistently reluctant to use compulsory purchase except as a last resort, unlike the experience in Germany and France. More generally, authorities could usefully play a more active role in land assembly, especially where they own land. Decisions are necessary about whether public sector land should be released for short-term gains or on a strategic basis. The Netherlands in particular has clear good practice in this context. The government here is reviewing the 'highest and best value' requirements for the sale of public land assets as well as alternative equity retention approaches.

In sum, there are several ways that land assembly issues could be addressed in England, based on good practice from other countries. In the short term, local authorities could engage more actively in the land market, especially where schemes have been stalled. Where problems of land ownership were stalling schemes, compulsory purchase could be used to unlock them. Special delivery vehicles have also been used to ensure development or redevelopment in England in the past, as they have been in much of Europe. These have considerable potential for the future.

In the longer term, the issue of land ownership could be the subject of review. Land owners often have motives that are unrelated to development or unrealistic expectations about the value of their land. A comprehensive review could explore the problems and commission evidence from which to develop realistic recommendations.

Pros and cons

- The importance of land assembly in constraining land supply depends on ownership and its fragmentation and the types of land being brought

forward for development – for example, brownfield or greenfield; small or large sites; self-build or large scale developers.

- Land readjustment is a way of pooling existing use values of land in multiple ownership in order to create added value through regeneration and redevelopment.
- Because the original owners share in the uplift, there is less need for more stringent regulatory measures such as compulsory purchase.
- However, like any land value capture mechanism, it is dependent on the buoyancy of the market outcome. It also appears to be associated with planning systems in which municipalities play an active role in land assembly and the land market.

Infrastructure provision

In several countries there are mechanisms to ensure that the necessary infrastructure is in place before planned development takes place. In France in particular there is a large employment tax hypothecated for infrastructure funding while the Netherlands has had for many years a mechanism to get infrastructure in ahead of time as local authorities receive money through the transfer of ownership before enhancement. In the USA the use of tax increment financing (TIF) allows infrastructure to be funded against future revenues in large-scale projects.

First introduced in 1971 for Paris, the 'versement transport' (VT) is a payroll tax hypothecated to public transit. It is justified in terms of higher productivity benefits to employers and employees located in cities because of agglomeration economies, that is, the benefits of access to a large labour market. Both employers and employees benefit via the transport system from access to a larger labour market (Bout and Hensher, 2007). The rate of tax (in 2002) ranged from 0.55 per cent of payroll in towns between 10,000 and 100,000 population, 1.0 per cent for those over 100,000 and the outer suburbs of Paris, 1.6 per cent in the inner suburbs and 2.5 per cent in central Paris. It has been argued that the availability of substantial sums through the VT has encouraged administrators to spend it without careful assessment of value for money. However, it can also be argued that VT has enabled the development of an efficient public transport system that partly compensates for the pull of decentralisation. The RER in Paris is cited as a good example.

Traditionally in the Netherlands the supply of residential land was controlled by municipal government, through an 'active land policy' (Buitelaar, 2010) in which the bulk of the land designated for urbanisation was bought and sold by municipal land companies (Van der Valk, 2002). This meant that local authorities owned virtually all the land for development and they bought land, subdivided it, provided the infrastructure and the utilities, and sold the subdivided plots to those who would build the dwellings – property developers, housing associations or owner-occupiers. The sale price covered at least the costs of the infrastructure provision. More recently, however, municipalities are finding that greenfield land has already been purchased by developers, and other mechanisms for funding the necessary infrastructure are being explored such as land value capture and land readjustment (Van der Krabben and Needham, 2008).

Tax increment financing (TIF) has been used extensively in the USA since the 1950s to help fund inner city regeneration schemes. Local authorities are able to borrow against the future tax income that accrues from the redevelopment once it is completed. In the early 1950s many states created housing authorities that acted as urban renewal agencies to

manage federal funds made available for urban regeneration under the 1949 Housing Act. The Act required match funding, so in 1951 California enacted implementing legislation so that TIF could be used as a local financing tool to match the federal funds. The use of TIF grew rapidly in the 1970s and 1980s when there was a shift in how urban renewal was perceived. Instead of focusing purely on land clearance and housing renewal, it expanded into a revitalisation tool to improve both the build environment and the social fabric of blighted urban areas (Sear, 2012).

The use of TIF has changed further since then. It has been used for a variety of purposes from the original federal housing programmes, to urban revitalisation and economic development. It is authorised as a financing mechanism in 49 states (the exception is Arizona). Although the details of TIF schemes vary, there are two determining qualifications: the presence of blight conditions and meeting the 'but for' test that redevelopment would not occur without TIF. An initial study is required that demonstrates the existence of blight, shows how the 'but for' condition is met, and designates the TIF area boundary.

TIF has been criticised on the grounds that commercial TIF districts reduce commercial property values in the non-TIF part of the same municipality. In other words, if a shop or supermarket is subsidised in one location, there will be less demand for a supermarket in a nearby location. However these spillover effects should be part of the pre-development assessment.

Potential for use in England

While the experience of other countries suggests that there is a need to provide services and infrastructure ahead of new development, this is clearly dependent on established funding mechanisms.

In England large scale strategic funding sources do not exist. The Community Infrastructure Levy (CIL) which should provide some funding to local authorities for local infrastructure is being introduced gradually across the country. The duty to cooperate on cross boundary issues however does not apply to setting the CIL levy and therefore there is a tension between local level delivery and the funding of sub-regional and cross-boundary infrastructure. There is no regional or sub-regional strategy to coordinate this. This is one area where England is very different from the other countries studied and where there is concern that the English system cannot work effectively without clear-cut mechanisms in place.

As already noted, several planning authorities in England have addressed these problems by pooling resources, using loan finance on a rolling basis so that as values rise after development, loans are repaid and thus made available to support other infrastructure schemes. Such examples should be disseminated more widely among local authorities. The government has also promised further guidance on the duty to cooperate, which involves all public bodies, not just adjacent planning authorities.

The possibility of using TIF has been available for some years but has been constrained by the limited revenue streams and the conservative approach taken by HM Treasury in this context.

Pros and cons

- A hypothecated tax for infrastructure can raise substantial sums. How these are spent will depend upon the incentives to the authority. There is a potential disincentive to some employers to locate in cities or parts of cities where the tax is higher. In some circumstances this may result in perverse outcomes as well as lower revenues.

- In addition, there may be incentives to provide infrastructure in the wrong locations simply because the funds are there.
- The Dutch approach to new housing development has always been associated with a proactive role by local government. Essentially it involves a form of land value capture (see later) which is now being undermined by developers and landowners wanting a greater share. As a result, land readjustment may be a more appropriate tool.
- TIF has the potential to raise additional funds, but like all regeneration policies there may be a displacement effect which could adversely affect other areas.

Compensation and tax incentives

The idea of compensating those who suffer losses as a result of new development or changes in zoning rules has existed in many countries over time. In the Netherlands there is provision for compensation in the case of 'worsenment' whereby those individuals who are affected have to apply to the municipality for compensation. Particularly since the burden of proof is on the applicant, it is not widely used. The municipality bears the cost of successful applications.

While this example is not expressly aimed at reducing anti-development attitudes, it could be used with that in mind. Developers could be required to bear the cost. It has been estimated that because only those in the immediate vicinity of a new development would be defined as affected by it, the cost would be commensurate with the desired outcome (Corry, Mather and Smith, 2012).

Other types of compensation or incentives include benefits to local authorities. In Switzerland, for example, the cantons retain the taxes that accrue as a result of new development. As this is their main source of revenue, it provides a natural incentive for further development (Evans and Hartwich, 2005). Indeed, in most of the countries studied, there are local taxes which produce meaningful sums that can be spent on local community amenities. Because the size of local government unit is generally much smaller than England these benefits are more transparent. However, in many cases where taxation and the provision of services are solely the responsibility of the municipality, such systems can lead to competition between authorities. This can result in exacerbated regional and local economic imbalances which are difficult to address. In England, for example, there are cases where regeneration efforts in large cities or inner urban areas are in danger of being jeopardised by development programmes in adjacent authorities, much as out-of-town shopping centres are blamed for a collapse of town centre retail outlets.

Density bonuses or adjustments are another form of incentive to development. Several countries operate density bonuses, including Australia, New Zealand and a range of American states. Density bonuses can be used to compensate developers for the potential loss of income suffered by providing affordable housing on site. In Australia, for example, the National Rental Affordability Scheme (NRAS) comprises a federal contribution to new low cost rental dwellings of $6,000 as a refundable tax offset or grant, and a State or Territory contribution of $2,000 as a direct payment (Gurran, 2008).

Potential for use in England

England lacks the local tax systems that can encourage growth in some countries. S106 was successful partly because it was delivered locally,

rather than going to the Treasury. The extent to which it is hypothecated to affordable housing is also atypical – other countries would tend to use uplift more for offsetting the external costs of development and for infrastructure provision. The New Homes Bonus is a first step in the direction of incentivising local authorities, although it is thought to be insufficient to deliver the desired outcomes. The participants in the roundtable discussion thought that the value would need to be tripled to affect decisions in many areas. There is also a danger of deadweight loss – little or no housing has yet been built that was not already in the pipeline. Even if the incentives were increased the evidence from Switzerland and other countries suggests they are not enough to incentivise richer pressured areas. In England while local government finance has been reformed giving authorities more control, the economic and political context of budget cuts still leaves local authorities without large scale resources.

The coalition government is taking forward land auction pilots on *public* sector land with the aim of having two sites ready for market by the end of the year. The land will then be auctioned to the highest bidder. This is, in principle, similar to the approach in Hong Kong and to a lesser extent Singapore and China – all of which have nationalised land – and the proceeds are used to provide infrastructure and in some cases incentives to employers rather than to compensate individuals.

Under the government's original proposal local authorities would be able to ask landowners to submit sealed bids for the price at which they would be willing to sell their land. The council would be given the right to buy the land for a certain period and would grant planning permission for the land that they wanted to be developed. They would then auction it to developers to raise money from the increase in land value following planning permission. While the model has some similarity to the system that has worked well in the Netherlands, the auction element as a model is only in the theoretical literature, partly because of the prevalence of zoning but also because of concerns about corruption.

Pros and cons

- Direct compensation to individuals would have a clearer link to a particular development but nowhere has it been used as a way of addressing anti-development attitudes as opposed to specific costs associated with development.
- HM Treasury generally opposes hypothecated taxes (except in kind, that is, S106).
- Competition between authorities can exacerbate regional imbalances which are difficult to address.
- Density bonuses produce higher densities than initially planned. If the zoning regulations found that a certain density was desirable in an area in planning terms, then allowing a bonus to certain developers risks producing undesirable housing.

Land value capture

In Australia, the Netherlands, New Zealand and the Republic of Ireland, development contributions are charged to landowners to fund the provision of infrastructure. In most cases the charges are based on standard tariffs so that the developers know in advance how much they will cost. The charges can vary by location, local authority area and greenfield/brownfield site.

In the USA inclusionary zoning has become increasingly used to help deliver affordable housing. It aims to make it possible for some lower and middle income households to live in higher value areas. It is a response by planners to criticisms of the exclusionary effects of traditional zoning, which separated people by class, income and hence by ethnicity and prevented undesirable land uses from entering higher income communities. These policies are termed 'inclusionary' because they either mandate or encourage developers to incorporate a proportion of homes in their market developments that are sold or rented at below-market prices. In exchange, developers are offered ways of covering any financial losses that they may incur on the affordable homes, such as increasing the overall size or density of the development. There are also large-scale tax reliefs for the new provision of low cost housing.

Both Denmark and New Zealand had systems of land value taxation, a tax on the unimproved value of land, disregarding the value of buildings or improvements. It is thus unlike other taxes on land which normally tax the property, including buildings as well as land. It has often been argued that land value taxation is a more efficient tax than other approaches because it does not distort the allocation of resources. However in principle such taxes affect vacant land as well as land that has an economic return and therefore provides an incentive to develop. Arguably it therefore acts as an incentive to put land to good use and a disincentive to leave land vacant or underused – but may be distortionary in uncertain environments and for large scale developments. However, in both countries land value taxation is disappearing, although a variant known as site value rating is used in some localities. Some parts of Pennsylvania still use land value taxation at municipal level. One of the most important criticisms is that it is not related to the ability to pay, because some owners may be property rich, but income poor or because vacant land has no direct revenues coming in.

Potential for use in England

What is clear from the examples that we have identified is that increases in land values are a usual outcome of planning systems whether they are permission or zoning based. The amount of gain available depends upon the extent of constraint; the quality of planning decisions and therefore resultant agglomeration benefits; and the expected growth of the economy. If and how the gains are taxed varies greatly – from simply going into the Exchequer; to providing infrastructure; to following the English example of supporting affordable housing; or just allowing the land owner to benefit.

Land value capture in the form of planning obligations and S106 contributions has been used in England for over 20 years. The CIL is another form of land value capture which is seen as more transparent and fairer because the charges are published ahead of time and it applies to all development unless the local authority makes certain exceptions (which many of them are doing).

One issue is that S106 agreements are determined at a single point in time, which might coincide with the peak of a boom or the bottom of a trough. This means that when the market turned down, development may be stalled because of viability problems, and conversely when the market picked up the local authority would not benefit from capture of rising land values. It could be helpful if, instead, land value capture were index linked to house prices or some other indicator, so that local authorities could capture land value when they were rising but developers would not be unduly penalised when value fell. Many of the same arguments apply to tariffs such as CIL where there is an incentive to local authorities which want employment and

development to set the rate low so that economic activity in the area is not lost.

Pros and cons

- Given that permission gives a large increase in land value in many circumstances, the case for some form of capture, particularly to pay for other sources of uplift such as infrastructure provision, is strong. Even so, land value capture works best in periods of economic growth, and is difficult or impossible when land values are falling. It is also more successful if it can adjust to changing values.
- Land value taxation aims to tax the stock of wealth held in land and is potentially a fair system that does not distort decision making. However it is not related to ability to pay and has proved extremely difficult to implement over the economic cycle, especially when values rise. A particular problem is that in old age many homeowners are income poor and property rich which is a disadvantage.
- A further drawback is the difficulty of estimating the unimproved value of land that is already developed.

Summary

- Most instruments and approaches that are successful elsewhere already exist in some form in the UK so the question becomes whether they could be made to work better, adjusted to become more effective or be modified to enable them to be used more widely. In some cases it may simply require greater publicity for mechanisms that have worked but more often it is about how instruments work together.
- All the countries examined made decisions through local democratic means. One issue which was raised was whether smaller local authorities are more successful at changing attitudes to growth. This seems to be the case in a number of countries, either through local competition or stronger community ties. Another important issue relates to the need for a strategic level of governance. Even in highly localist countries this strategic level exists.
- A core issue in ensuring efficient development is the existence of a funding stream for infrastructure. Countries with long experience of local government land assembly have been able to provide roll-over funding to make early provision possible. Tax approaches have proved less robust. While it is clear that TIF has been successful in some instances it has not yet been widely used in England. The more general approach has been to tax planning gain in one way or another and this approach is becoming more general internationally.
- More fundamental approaches to land value taxation covering the stock of land rather than the flow have strong theoretical bases but have turned out to be difficult to operate in more volatile economic circumstances.

A further fundamental issue is the responsiveness of the system and the extent that it can adjust not just to current pressures but also to future change. A concern is the extent to which the English system takes a short-term and somewhat inflexible view of appropriate development and funding; while longer-term, more strategic approaches could generate better outcomes and provide better returns to government over time.

6 CONCLUSIONS: IMPLICATIONS FOR THE FUTURE

The history of planning in England and the UK more generally starts earlier than most other countries and many of the ideas embedded in the legislation were later adopted elsewhere.

It is important to note that urban containment policy was introduced in the 1930s as large-scale greenfield development outside the major urban areas occurred. The green belt policy had many objectives in addition to reducing urban sprawl and making more efficient use of infrastructure (see House of Commons, 2012) and it is important that it was in place prior to the development of the planning permission and taxation system introduced in 1947. Green belts were thus an accepted part of the framework and had an impact on how the presumption in favour of development has been implemented over the 65 years that have followed.

A second important element in how the ethos of development has occurred is that planning permission was from the beginning seen as running hand-in-hand with taxation of planning gain – although the resultant income was to go to central government which also funded (and still funds) major infrastructure. Over the decades there have been many changes in tax rates which are now linked to capital gains taxation and it was not until 1990 that a stream of revenue (or implicit revenue) was provided for local authorities through S106 and now CIL.

A third is that at much the same time new town development corporations were introduced to play an important, positive role in large-scale development which could relax the pressures on metropolitan areas, notably London. This enabled a structured means of providing infrastructure as well as land assembly and allocation.

Over the years some aspects of the system introduced in the 1930s and 1940s have remained in place – particularly the planning permission system and the green belt. Both taxation and the potential for large-scale development corporations have been quite significantly reduced. Moreover the economic pressures have changed, particularly with respect to the

incentives to redevelop urban land and the complexities and costs of implementing this process.

The current system now formally looks very different from that observed in most of the case study countries – notably because of the lack of a zoning system and of a regional layer of government outside London. However, once we examine different systems with more care it becomes obvious that most countries face similar challenges and address them in relatively similar ways. The biggest difference appears to be in the link between the presumption in favour of development and the reality of, on the one hand, the national framework and incentive system, and on the other, of addressing local pressures.

In this context it should be stressed that most of the mechanisms identified in this review have been used successfully in England in the past although not always on a large scale and not universally across the planning system. The question is whether they could be used more widely and put together more effectively to deliver sufficient land to meet current and future housing needs.

From the review and discussion the three core areas where international evidence can be of particular value are:

- how to provide sufficient incentives to bring land forward for housing
- how to enable growth without generating inefficient urban sprawl and without constraining development
- how to fund and produce the necessary infrastructure to support new housing development.

Incentives to bring land forward for development

Most of the case study countries provide local incentives for development linked to local governance within a national (and usually also regional) planning framework. These tend to work better where the municipality retains local taxes and this is seen as beneficial because they are spent on local services. There is also a suggestion that this works better where the municipality is small enough for the community to appreciate benefits such as providing an income base for local shops, cinemas and other privately provided amenities that come with development.

Local incentives are not possible without some degree of local governance and some countries appear to have got a better balance than England. Neighbourhood planning may have potential, but if this is led by business it may not be seen as democratic and will not give local residents a sufficient stake in planning for new development.

In the short term, the New Homes Bonus is the main mechanism to incentivise local authorities to give planning permission. It does not directly incentivise land supply. The outcomes need to be monitored to see whether additional land and homes come forward, not just those already planned. Similarly, CIL needs careful monitoring over the economic cycle to see whether authorities have set rates so low in the current climate that the community loses out in terms of potential infrastructure when prices rise.

There are a number of successful examples of more interventionary means of bringing land forward. These involve the local authority with other partners taking the lead in land assembly and land readjustment. These have often been well established so that there are revolving funds available. In the English context the most obvious approach would be to enable the Homes and Communities Agency and the Greater London Authority to play the

leading role in developing such approaches from a base of identified public land.

The Callcutt review (2007) argued that if the housebuilding industry could ensure a reasonably certain medium-term land supply comprising not just the least desirable locations but a genuine mix, risks would be reduced and output would rise. This might include new garden cities or new towns. For long-term sustainable change in ensuring land comes forward there has to be a way of encouraging developers to build good quality houses and environments instead of trading in land.

More fundamentally, the operation of the land market in England needs careful review. Under the current system all the incentives are to obtain planning permission as this increases the value of the land. Expectations from landowners can therefore prevent land coming forward until the price is right.

Growth management

It is clear that the green belt as operated over the past 60 years has protected the countryside and helped to maintain inner urban areas. As a result it is a popular policy which should be continued. However it has constrained land supply in pressured areas which comes at a significant price. The evidence from other countries suggests that it should be operated far more flexibly than has been the case over the decades. Boundaries should be revisited at regular intervals, local planners should monitor the land supply within those boundaries to ensure that prices do not 'go through the roof' and should play a more active role in the local housing market, particularly with respect to publicly owned land. Green belt adjustment or swaps are a starting point, especially where clearly related to land that has little amenity value but good accessibility. Such swaps are already taking place in England on a small scale, but more needs to be done to address the problem.

Inter-related with this emphasis on urban constraint is the role of the brownfield first policy that has dominated English planning since the turn of the century. Other countries have similar approaches to supporting urban redevelopment, but nowhere is it so strong and usually it is accompanied by more proactive policies of land readjustment, compulsory purchase and regeneration.

While growth management cannot be achieved through an immovable boundary without incurring very large costs, there are also costs associated with expansion which must themselves be managed. Where large areas are involved, special delivery vehicles have proved successful in the past and have potential for the future.

In cases of urban expansion, extensions, or new towns and villages, local authorities acting together or singly should be prepared to become more actively involved in land assembly. The Netherlands provides a relevant example, as do Milton Keynes and Cambridgeshire. In the long term public land needs to be used strategically, and not simply to raise funds.

Infrastructure provision

A lack of infrastructure – and indeed services more broadly – can not only stall development but acts as a disincentive to existing residents to support new housing. Most countries agree that provision of infrastructure and services in advance of development – or at least at the same time – is

essential. There are three main ways in which infrastructure for housing can be funded and produced: through the uplift in land values created by planning permission; through the tax system, whether from general taxation or from the additional tax revenues from the new development; and through debt finance. The question is, which, or what mix, is the best way for new housing development?

Land value capture (planning gain) is successful mainly when the economy is buoyant (or when constraints are so great that increases in value occur throughout the cycle). It is much more difficult in a downturn. The CIL is being introduced during a downturn in the housing and land markets and the risk is that it will be set too low as local authorities do not want it to discourage development. This means that in an upturn, when the uplift in land values is much higher, local authorities will have missed out on the opportunity to fund and provide infrastructure and services.

Funding infrastructure through taxes, particularly through the additional tax revenues from new development directly, is attractive and TIF is a mechanism to enable those future tax revenues to be used ahead of their receipt by enabling local authorities to borrow against the value of the future tax revenue.

Another mechanism that has potential in both cases – land value uplift and tax revenue – is a rolling infrastructure fund. This requires an initial source of funding, probably from general taxation, to be created which is then allocated in the form of loans or equity shares. As the money is repaid (either from planning gain or from additional tax revenues) it becomes available for further investment in infrastructure. A rolling fund has the advantage that it can be used during the downturn and repaid when the market picks up. It can thus prevent local authorities from 'negotiating away' the developer contributions from S106 which would then be lost forever, even when the market recovers.

A final comment: how the current system might work better – a Cambridge case study

Cambridge provides an example of how current policies might better be integrated to provide an environment for a more positive approach to large scale continued land supply and development.

> *The university town of Cambridge is surrounded by a green belt that has been a tight constraint on land supply and housing for most of the post war period. As a result house prices have risen steeply in each market upturn making housing increasingly unaffordable especially to first-time buyers. However, in the 1980s, the university and business community realised that unless the city was allowed to expand it would lose out to international competition such as Harvard and MIT and cease to be one of the greatest universities in the world and a fast-growing centre for science and technology – the 'Cambridge phenomenon'. The county Structure Plan reflected this change in vision and quietly extended the limit of the green belt to release large sites for housing to the north and south of the city. At the same time policies of brownfield first, infill development and increased densities, especially near the station, were pursued vigorously. Part of the planned growth included a new village and town on the other side of the green belt in south Cambridgeshire. All of this was achieved by local authorities working together rather than in competition, led by a delivery vehicle, Cambridge Horizons, which they established to implement*

their vision. Transport infrastructure was a huge problem – both providing it and paying for it. The city was selected as a growth area which enabled access to the national Growth Fund and this was used to support a new guided busway on the disused railway line and access roads that opened up the sites in the southern fringe. The fund was delivered in the form of loans and equity shares so that repayments would enable it to roll forward to fund future projects, including a new station inside the city. The new town, Northstowe, was delayed for years due to multiple land ownership (including public sector land) and difficult negotiations over S106 that threatened to stall the scheme further as the recession hit. However, the use of the rolling fund unlocked the development, without loss of developer contributions or affordable housing, which will be delivered as planned using loans from the rolling fund to be repaid in the future when the market houses are sold. The town is on the route of the guided busway and although when it was planned this infrastructure was uncertain, it has now been provided in advance of development which is undoubtedly a better outcome. Interestingly, there has never been a campaign against Northstowe yet other speculative proposals from developers have triggered strong resistance from local residents. This was largely because of its location compared to the other proposals which could never be supported by sufficient transport infrastructure.

Key elements

- *Local planning authorities working together not in competition – Cambridge Horizons was set up as a delivery vehicle (now defunct but the local authorities have maintained a Joint Strategic Planning Committee)*
- *University and business community realising the need for growth if the city was to retain its international reputation*
- *Using available funds to support infrastructure in a long-term sustainable way and to ensure development goes ahead without loss of developer contributions.*

Cambridge has always had a proactive approach to development as compared to many other areas. It is also committed to providing an environment in which cutting edge businesses can operate effectively. There are some large-scale resources available, in part because of the history of partnership. As such it is an easier environment in which to use policy effectively to bring land forward and support development. Therefore it is an example that many other areas may find difficult to follow – but it is also proof that attitudes and incentives can change.

Summary

Incentives for development are difficult in the English context but should involve the local community. The New Homes Bonus and neighbourhood planning may be a way forward, but at present these just add to uncertainty.

Growth management, rather than urban containment per se, needs to be introduced in both the short and longer term. This requires more pro-active planning, involvement in the land market and in monitoring supply.

Infrastructure provision and financing is crucial for future housing development and as a way of incentivising existing residents. It probably requires all three methods identified here – planning gain, local tax revenues and rolling debt funding.

REFERENCES

Adams, D. and Leishman, C. (2008) *Factors affecting build out rates*. Report to CLG Housing Markets and Planning Analysis Expert Panel. Reading: Henley Business School

Ball, M., Meen, G. and Nygaard, C. (2010) 'Housing supply price elasticities revisited: evidence from international, national, local and company data'. *Journal of Housing Economics*, 19(4), pp. 255–68

Barker, K. (2003) *Review of Land Supply: Interim Report*. London: HM Treasury

Barker, K. (2004) *Review of Land Supply: Final Report*. London: HM Treasury

Barker, K. (2006) *Review of Land Use Planning: Final Report*. London: HM Treasury. Available at: www.ukcip.org.uk/wordpress/wp-content/PDFs/Barker_review_landuse.pdf

Barlow, J., Bartlett, K., Hooper, A. and Whitehead, C. (2002) *Land for Housing: Current Practice and Future Options*. York: Joseph Rowntree Foundation

Bout, D. and Hensher, D. (2007) 'The dark side of making transit irresistible: the example of France'. *Transport Policy*, 14(6), pp. 523–32

Brueckner, J. K. (2000) 'Urban sprawl: diagnosis and remedies'. *International Regional Science Review*, 23(2), pp. 160–70

Buitelaar, E. (2010) 'Crack in the myth: challenges to land policy in the Netherlands'. *Tijdscrhiftvoor Economische en Sociale Geografie*, 101(3), pp. 349–56

Burgess, G. and Monk, S. (2011) *Capturing Planning Gain: The Transition from Section 106 to the Community Infrastructure Levy*. London: Royal Institution of Chartered Surveyors (RICS)

Burgess, G., Monk, S. and Whitehead, C. (2011) 'Delivering local infrastructure and affordable housing through the planning system: the future of planning obligations through Section 106'. *People, Place & Policy Online*, 5(1), pp. 1–11

Callcutt, J. (2007) *Review of housebuilding delivery*. London: DCLG

Crook, A., Dunning, R., Ferrari, E., Henneberry, J., and Watkins, C. (University of Sheffield) Burgess, G., Lyall Grant, F., Monk, S. and Whitehead, C. (University of Cambridge) and Rowley, S. (Curtin University of Technology) (2010) *The incidence, value and delivery of planning obligations in England 2007–08*, Final Report to DCLG, London, March 2010

Corry, M., Mather, G. and Smith, D. (2012) *Compensating for development: how to unblock Britain's town and country planning system*. London: The Infrastructure Forum

Dawkin, C. and Nelson, A. (2002) 'Urban containment policies and housing prices: an international comparison with implications for future research'. *Land Use Policy*, 19, pp. 1–12

Department for Communities and Local Government (DCLG) (2012) *National Planning Policy Framework*. London: DCLG

Ellis, L., Kulish, M. and Wallace, S. (2012) 'Property market cycles as paths to financial distress'. In A Heath, F Packer and C Windsor (eds) *Property Markets and Financial Stability, Proceedings of a Conference*, pp. 109–32. Sydney: Reserve Bank of Australia

Evans, A. and Hartwich, O. (2005) *Bigger, better, faster, more: why some countries plan better than others*, London: The Policy Exchange

Gurran, N. (2008) 'International practice in planning for affordable housing: implications for Australia'. Paper presented at the Australasian Housing Researchers' Conference

HM Treasury (2012) *Plan for Growth: Implementation Update (March 2012)*. London: HM Treasury. Available at: www.hm-treasury.gov.uk/ukecon_growth_index.htm

HM Treasury and Department for Business, Innovation and Skills (2011) *Plan for Growth*. Available at: http://cdn.hm-treasury.gov.uk/2011budget_growth.pdf

HM Treasury Select Committee (2011) *Principles of Tax Policy*. Eighth report of 2010–11 session. Available at: www.publications.parliament.uk/pa/cm201011/cmselect/cmtreasy/753/753.pdf

House of Commons Library (2012) *Green Belt: Commons Library Standard Note*. Available at: www.parliament.uk/briefing-papers/SN00934

Huxley, J. (2010) *Value capture finance: making urban development pay its way*. A ULI Europe Publication in partnership with the ULI Urban Investment Network Founding Partners

Jun, M-J (2004) 'The effects of Portland's Urban Growth Boundary on urban development patterns and commuting'. *Urban Studies*, 41 (7), pp. 1333–48

Monk, S. (1991) *The Speculative Housebuilder*, Research Report 29. Cambridge: Department of Land Economy

Myant, M. and Smith, S. (2006) 'Regional development and post-communist politics in a Czech region', *Europe-Asia Studies*, 58 (2), pp. 147–68

National Ecosystem Assessment (NEA) (2011) *Synthesis of Key Findings*. London: Department for environment, Food and Rural Affairs (Defra). Available at: http://sd.defra.gov.uk/2011/06/national-ecosystem-assessment-synthesis-report/

Nelson, A. C. (1986) 'Using land markets to evaluate urban containment programs'. *Journal of the American Planning Association*, 52, pp. 156–71

Pointer, G. (2005) 'The UK's major urban areas'. In R. Chappell (ed.) *Focus on People and Migration*, Chapter 3, pp. 45–60. London: Office for National Statistics and Basingstoke: Palgrave Macmillan.

Preuß, T. and Ferber, U. (2008) *Circular land use management in cities and urban regions – a policy mixing utilizing existing and newly conceived instruments to implement and innovative strategic and policy approach*, Deutsches Institut fur Urbanistik (German Institute of Urban Affairs)

Sear, C. (2012) *Tax increment financing*, Standard Note SN/PC/05797. Westminster: House of Commons Library

Stephens, M. (2011) *Tackling housing market volatility in the UK*. York: Joseph Rowntree Foundation

Van der Krabben, E. and Needham, B. (2008) 'Land readjustment for value capturing', *Town Planning Review* 76 (6) 651–72

Van der Valk, A. (2002) 'The Dutch planning experience'. *Landscape and Urban Planning*, 58 (2–4), pp. 201–10

APPENDIX 1: METHODS AND COUNTRY SELECTION

This project is a review of international approaches to land supply including policies to support new housing provision and how the uplift in land values from planning permission is captured for public benefit. The methods comprised a literature review (including policy documents and 'grey' literature), the development of a typology of approaches and environments, together with input from experts in selected countries. This enabled the research team to clarify the range of available instruments and how they operate – and therefore their relevance to the UK.

The first stage in the research was a project meeting to discuss a proposed long list of potentially relevant countries based on existing knowledge.

Data were analysed for this long list of 19 countries and four states in the USA to assess population, population change, population density, population density in major urban areas, completions of new dwellings overall and per 1000 population, and house price indices.

Countries and states with an asterisk were eliminated on the basis of the data analysis, discussion of the initial evidence review and the broad literature and policy review.

Australia
Austria*
California*
Czech Republic
Denmark
Finland*
France
Germany
Republic of Ireland
Japan*
The Netherlands
New Jersey
New Zealand
Norway*
Oregon*
Pennsylvania*
Poland*
Scotland*

Singapore*
South Korea
Sweden*
Turkey*

It was decided to treat the USA as a whole, with a case study of New Jersey.

Country experts were then surveyed for the remaining 11 countries to explore land supply. An in depth literature review was conducted for each country.

The report was drafted based on the findings from the research. The findings and their implications for the UK were discussed at a roundtable held in September. The roundtable included developers, planners, landowners' representative body, RSLs, policy officials, HCA, CLG, and relevant academics.

APPENDIX 2: COUNTRY PROFILES

Australia

Australia's five major cities (Adelaide, Brisbane, Melbourne, Perth and Sydney) are all highly suburban, with low densities by world standards, and high levels of home ownership and car dependence. The structure and tenure of housing in Australia's major cities are very similar. In 1991, about 75 per cent of the stock consisted of detached houses, with very little high density housing except in Sydney. Around 70 per cent of households owned or were buying their dwellings, five per cent rented from a public housing authority (except in Adelaide, where the figure was ten per cent) and 20–25 per cent rented from a private landlord. This pattern had changed very little over the previous 30 years (Forster, 2006). Federal government policies have encouraged home ownership, provided funding for public housing systems in each State, and neglected the private rental sector. However, since the early 1990s, rates of home ownership have fallen (particularly for young people) and housing densities have increased. This is has coincided with increasing house prices and affordability problems, particularly in the most desirable and pressured areas.

The planning system in Australia is largely governed by the states and territories, with the Commonwealth government having very little formal involvement in plan making or development assessment, aside from matters of 'national environmental significance'. Each of the states and territories have their own overarching planning legislation governing processes of land allocation and development control, with varying degrees of delegation to local government (known as 'councils' or 'municipalities'). Increasingly, the states have proclaimed overarching strategic policy for implementation by local governments. The states have also undertaken metropolitan and regional planning, with varying levels of local involvement. More detailed decisions regarding local planning objectives, land allocation (zoning), density and design controls and the majority of development assessment, is undertaken by local government (Gurran, 2011).

Since the post war years, each of the capital cities have undertaken various approaches to metropolitan planning (Hamnett and Freestone, 2000). The current generation of metropolitan plans, produced over the past decade, reflect a particular set of policy concerns including the promotion of more intense, mixed uses around transportation hubs, the need for a greater mix of housing types, and greater housing affordability, alongside objectives

for environmental protection and economic growth (Bunker and Searle 2009).

Thus in 2002, Melbourne was the first to introduce a critical reform of metropolitan planning in its strategy *Melbourne 2030*, followed by similar plans for Australian state capital cities. These included Sydney's *City of Cities* in 2004, Brisbane's *South Eastern Queensland's Regional Plan* in 2005 and Adelaide's *South Australia Strategic Plan* in 2007 (Goodman *et al*., 2010). The aim of Melbourne 2030 was to create a more compact city by encouraging medium density housing and smaller house lots (plots), increasing the proportion of development in existing activity centres (urban centres) and reducing development on greenfield sites on the urban fringe. The policy goals attempt to reconcile a more compact, sustainable city with improved affordability of housing. However, analysis of the 2006 Census showed that household growth in greenfield developments in outer Melbourne, for example, increased despite the policy.

Supply response to rising demand

The construction of new dwellings, as in the UK, has failed to keep pace with rising demand in Australia in the 2000s. This lack of response is generally attributed to planning or regulatory constraints but there is little evidence on whether these increased in Australia during this period (Yates, 2011). Improvements to the planning system might improve short run responses to rising house prices, but it is not clear that such changes can increase long run supply elasticities because of the way that increasing urbanisation and growth put pressure on land prices. While there is no overall shortage of land in Australia, there are physical and planning constraints on urban land supply. If this scarcity of urban land is the problem, then any increase in demand will raise house prices (Yates, 2011, p.276).

According to the National Housing Supply Council (2011) demand for housing is projected to continue rising over the next 20 years. Although the market has weakened, supply shortages continue to widen and the gap may rise to over 640,000 units by 2031. This increasing gap means that housing output will have to be raised well above past trends to reduce the impact of rising house prices and increasing affordability problems on economic growth and living standards (National Housing Supply Council, 2011).

Special mechanisms for growth control

Australian state governments control the direction and timing of development, the designation of greenfield areas for urban use and their inclusion inside metropolitan areas by extending growth boundaries. Governments also zone land for different uses and other regulatory tools are available to enable urban development in planned urban corridors. The land development industry determines the amount of land released onto the market and its timing, house type and size, plot size and neighbourhood design. The industry also initiates the process for rezoning greenfield land for urban uses and obtaining planning permission. Developers therefore control the actual development process and councils act as the approvals authority. Metropolitan councils and state governments have generally acted in a reactive manner in approving greenfield development applications (Goodman *et al*., 2010), aside from the limited actions of government land organisations, established in each of the states and territories during the early 1970s by the Commonwealth (Labour) government. These government land authorities were intended to facilitate the release of new land for suburban residential development, and help stabilise the land market, by providing a steady stream of supply in response to demand (Milligan 2003). However, during the 1980s

most of these land development authorities became government enterprises, required to deliver commercial returns, and therefore limited in their potential for proactive land or housing outcomes. Interest in opportunities for government land authorities to play more proactive roles in strategic land delivery for housing supply and affordability has resurged in recent years (Milligan, Gurran *et al.* 2009).

According to the strategic plans of the five major cities, each one will have to accommodate significant numbers of extra dwellings over the next 20–25 years (Table A1). Across the five areas, planning policy is based on the three principles of *containment, consolidation and centres* (Foster, 2006).

Table A1: Anticipated need for additional dwellings in the next 20–25 years, Australian major metropolitan regions

Metropolitan region	Number of additional dwellings	Time period
Melbourne	600,000	by 2030
Sydney including Central Coast	550,000	by 2026
South East Queensland	550,000	by 2026
Perth–Peel	375,000	by 2031
Adelaide	69,000–137,000	by 2031

Source: Forster, 2006, Table 1.

Urban consolidation

Urban consolidation aims to reduce the rate of urban expansion by encouraging new development, usually at higher densities, within the existing built-up area. All states have adopted containment policies, including the use of Urban Growth Boundaries (UGBs), although only Victoria has a legally defined boundary. The other states' boundaries are legally defined by virtue of zoning. All governments have extended their UGBs over time, increasing the supply of urban land on the metropolitan fringe.

In Victoria, in the 1990s, the consolidation approach took the form of intensifying existing neighbourhoods in a haphazard way. This occurred because the planning system had become weak relative to the market under the Kennett government. The change of government in 1999 partly stemmed from public dissatisfaction with the outcomes, and as a result, there was a renewed focus on strategic planning and the planned redevelopment of strategic sites (Buxton and Tieman, 2005, cited by Goodman *et al.*, 2010).

Since 1991, urban consolidation policy has been responsible for a significant rise in medium density housing in all five major cities (Forster, 2006). Yates (2001, cited by Goodman, *et al.*, 2010) points out that urban consolidation may improve housing affordability because of the savings in land and infrastructure costs associated with dwellings on smaller plots and in more compact settlement patterns. She also argues that urban consolidation enables older householders to downsize from low-density family homes that are too large for their needs and hard to maintain, and – by making housing smaller and more affordable – enables more young households to enter the property market. Urban consolidation in Australian cities has led to higher housing densities in the inner and middle ring localities of Australian cities (Goodman *et al.*, 2010).

Provision of housing and related infrastructure

Fiscal incentives

The new National Rental Affordability Scheme (NRAS) comprises a Commonwealth contribution towards new low cost rental dwellings of $6,000 as a refundable tax offset or grant, and a State or Territory contribution of $2,000 as a direct payment. This provides an annual incentive over ten years (Gurran, 2008). The Federal Government's short lived Housing Affordability Fund also sought to promote housing affordability by funding local projects designed to fast track planning for housing supply (such as studies to support rezoning or residential subdivision) and reducing the costs of infrastructure (Gurran, 2008, 2011). South Australia introduced planning requirements for affordable housing at about the same time as the NRAS schemes were introduced and so was able to offset potential resistance to its affordable housing policies in this way (Gurran, 2008).

The Australian Treasury established a review of the entire tax system (Australian Government, 2010) which found that the current land taxes were not efficient because they were narrowly based and varied according to land use and land holdings. An efficient tax would apply equally to all land uses but could have a threshold based on the value of a square metre of land. This would mean that most low value land such as agriculture would not be taxed, and the tax would apply moderate rates to most other land. Land tax revenue would also replace stamp duty on land transactions.

Development contributions

Development contributions are effectively a tax on development land in the Australian context. These first emerged after the Second World War when private developers wanted to share the costs of the infrastructure needed to support the boom in housing construction (Gurran *et al*., 2008). The ability to levy contributions as a condition for planning permission has since been incorporated into State and Territorial planning legislation although the approaches vary between different areas.

Gurran *et al*. (2008), Gurran *et al*. (2009) and Gurran (2011) compare the different states' approaches to developer contributions. They find that in New South Wales the range of contributions is widest, from site-based costs to regional transport (in the Sydney Growth Centres). In contrast in South Australia, contributions are limited to open space, access roads and hydraulic connections, plus car parking where onsite provision is not viable. However, there are other 'service rates' and 'service charges' which could be seen as *de facto* contributions. In Tasmania, if contributions are sought, both the amount of the contribution and its use are negotiated locally between authority and developer through a planning agreement. In Western Australia, the State government regulates contributions through policies, conditions imposed through planning and conditions of approval for the subdivision of land. Social infrastructure is not generally funded, except for land for schools. In Canberra (Australian Capital Territory Planning and Land Authority (ACTPLA)), there are no provisions for infrastructure contributions, but the costs of infrastructure can be offset by land sale or the levy on permitted use associated with redevelopment (a 'betterment charge'). Where land is owned by Australian Capital Territory (ACT), the government may discount the price of land in return for a requirement that the developer provides infrastructure for the new development (Gurran *et al*., 2008, p. 45).

Until recently, developers have mainly contributed to local facilities including shared infrastructure and services. There has been a clear distinction between local community provision such as libraries and regional level infrastructure such as railways and hospitals, which developers have

not been required to help fund. However, NSW is starting to collect contributions to regional infrastructure in metropolitan growth centres, and Victoria has been moving in the same direction, especially in pressured areas (Gurran *et al*., 2008).

Affordable housing

Most state governments do not require affordable housing under Australian planning legislation. Exceptions include South Australia and pilot schemes in New South Wales. The ACT system can also be characterised as a way of capturing land value for affordable housing. More generally, the zoning system, with its underlying assumed development rights resting with the land owner, affects the supply of land for development and effectively sets land values long before development (Gurran and Whitehead, 2011). This means that the potential to negotiate community benefits such as affordable housing is lost as development potential has been established in advance of planning proposals. It also means that if local authorities want to acquire land that has not yet been zoned for public purposes they must pay the market price. As a result housing, particularly for low and middle-income groups, was seen as the remit of the federal government who provided funding for affordable housing. Public housing has become a marginal and highly targeted housing tenure, falling from around 18 per cent of the stock in 1981 to less than five per cent in 2009, largely through Right to Buy and reduced public funding (Gurran and Whitehead, 2011, p. 1206).

However, attempts were made to address housing need through the planning system, including a community housing company in inner Melbourne established in 1985 and a pilot inclusionary zoning scheme in Sydney in the early 1990s. In 2001 Brisbane set up its own affordable housing provider with a compulsory development contribution scheme although that did not last after a change in the political stance of the council.

More recently, in South Australia a 2006 amendment to its Development Act allowed local plans to include provisions for affordable housing which put into practice a State affordable housing target of 15 per cent in new development areas. This initially applied to the redevelopment of public land, but is increasingly being extended to private land when major new residential areas are established or rezoned for higher density development (Gurran and Whitehead, 2011). Initiatives in Queensland and New South Wales are quite different and have not produced the scale of new affordable homes required. They have mostly not achieved affordable housing on the same site as market housing. This has limited the opportunities for mixed communities and made it more difficult for affordable housing providers to compete in the land market (Gurran and Whitehead, 2011).

Melbourne case study

Planning policies

Strategic planning in Melbourne dates back to 1971 when seven urban growth corridors separated by permanent green wedges were proposed. This has shaped Melbourne's development for more than 30 years. Growth was to be confined to these corridors, so that effectively Melbourne has had a UGB on its fringes since 1971. Both the 1987 metropolitan policy and that of 2002 continued this concentration of development in defined corridors while also protecting non-urban areas from urban development.

The 2002 Melbourne strategic plan, *Melbourne 2030*, included a dual containment policy that aimed to constrained growth on the urban fringe and increase densities in the metropolitan area. It proposed to limit new greenfield development to 31 per cent of the 620,000 additional dwellings

that would be needed by 2030. Of the remainder, 28 per cent would be infill developments within existing suburbs, and 41 per cent would be medium and high density 'strategic redevelopment areas' associated with major activity centres and including affordable housing (Forster, 2006). The strategy also proposed to increase residential density in outer urban growth areas from 12 to 15 lots per hectare (Goodman *et al*., 2010). *Melbourne 2030* projects a gradual increase in gross residential density[1] from a current average of 10 units per hectare to a 2030 target of 15 units per hectare, interpreted in the Urban Development Program (UDP) as a 28-year average (2003–2030) of 12.5 units per hectare (Buxton and Scheurer, 2007).

Land supply

Melbourne's 2002 UGB was extended around designated urban growth corridors, and in 2003 the government promised to maintain a 15 year land supply in these corridors. The corridors were increased significantly in 2003, in 2005 and again in 2008. In 2008, the government introduced accelerated development in the existing urban growth areas and simplified planning measures including a new urban growth zone (Goodman *et al*., 2010). In practice, the amount of zoned urban land released in the growth corridors in 2008 was eight years' supply. The Victorian government argues that the UGB has not increased land prices in the growth corridors and an Audit Analysis confirmed that land price has remained relatively stable since 2000.

In Melbourne, six or so large development companies own or otherwise control most of the greenfield land inside the UGB and the rural land adjacent to the UGB. This has led to claims of land banking and price fixing (Goodman *et al*., 2010, p.14).

Czech Republic

There are considerable differences between post-socialist countries in Europe. The Czech Republic was selected as an example, but it is important to remember that in some ways it is unique. In particular, for a relatively small country (population around 10 million) it has 14 regions and over six thousand municipalities and decision making is highly decentralised. Also, there are no signs of acute physical shortages of housing (despite some regional shortages), unlike Poland for example.

After the political reforms which began in 1989, a zoning system was developed to manage development in the Czech Republic which in theory applies at state, regional and municipal levels. However, with such decentralised decision making, land regulation is not strictly enforced which has led to problems of urban sprawl, mainly through self-build, on the edges of high demand urban areas, for example, Prague. The urban sprawl started only recently, and while it poses problems for some municipalities it has not affected all areas equally, even where there is high demand.

Planning system

After 1989, with the change in political regime, the democratisation of politics, government and public life led to radical decentralisation and the introduction of self-government in the municipalities. This has led to the rapid fragmentation of the pre-existing territorial administrative structure. The number of municipalities grew to reach a peak of 6,258 in 2001, with an average population of 1,631 (Myant and Smith, 2006). Although the number of municipalities increased, the next tier of administration (the district) was abolished, leaving the municipalities as the main functional bodies. Overall,

this was a radical shift to decentralisation. New local governments were elected in 1990. In 1992, the reforms were completed by legislation which decentralised public finances, strengthening the individual revenues of the municipalities (Illner and Andrle, 1994).

The Czech Republic thus has a three tier land planning system; in the first instance through the state plan (Policy of Land Planning) which guarantees land for state-provided infrastructure such as power stations, roads and railways. This extends to regional plans (Principles for Land Planning) in the 14 regions and to the urban plans of each of the more than six thousand independent municipalities, meaning that decision making is very decentralised. At municipal level, development plans have been a statutory requirement since 2006.

Special mechanisms for growth control

As noted above, urban sprawl poses problems for some municipalities, but to a lesser extent than in some Western countries. However, urban sprawl in the Czech Republic is relatively chaotic because of self-building in locations where the new houses have no infrastructure provision or proper access roads. Whilst the formal zoning system applied at municipal level suggests that there is strong land regulation, it is not very effective in practice. Each municipality can define its own regulations for land zones – this means that it is up to each municipality to decide what is and is not permitted in each zone. It was also relatively easy to make changes to urban plans before they became statutory in 2006. Moreover, municipalities tend to overestimate the amount of land needed for residential construction. Since land regulation does not effectively limit new housing supply, supply is relatively price-elastic. Because of the urban sprawl, several small municipalities around Prague stopped releasing land for housing. However, beyond Prague there are many other municipalities which have actually opened up their land markets to encourage new development.

Provision of housing and related infrastructure

As in other sectors of the economy, the housing system underwent a transformation after 1989, shifting from an administrative allocation system to one based on market principles, that is, the role of the state should be limited to that of establishing the conditions in which a housing market could emerge (Lux, 2009). Major changes included the restitution of part of the housing stock, the free-of-charge transfer of the unrestituted portion of the housing stock to municipal ownership, the privatisation of municipal housing, the introduction of new housing policy instruments, in particular housing allowances, a state premium for housing savings, interest subsidies to mortgage loans and mortgage interest tax relief. Whilst there are no official data on the volume of the housing stock returned to the original owners as part of the restitution process, it is estimated that it was around 6–7 per cent of the national housing stock. However, in large town centres, e.g., in the centre of Prague, 70–75 per cent of all buildings were returned to the original owners (Lux, 2009). This process created a relatively large private rental sector as compared with other post-socialist states.

There was a reduction in housing construction when revenue and capital subsidies for state rental properties were removed and when the price of construction materials increased (Lux, 2009). Since World War II, development in the Czech Republic has been gradually shifting east towards Moravia and away from Bohemia in the west, which historically was the economically stronger macro-region There are regions (the Northern Bohemia region) where there are vacant flats and the surplus supply pushes

housing prices down, and, conversely, there are regions with accelerated economic development (such as Prague and the surrounding areas) where there is still a high demand for housing and land and consequently house prices are high. Urban infrastructure, transport and telecommunications systems have been somewhat neglected (Illner and Andrle, 1994). Under the socialist regime, the need for housing in towns was addressed by the mass construction of prefabricated multi-storey apartment blocks on city perimeters, while housing in the inner cities and especially city centres remained in urgent need of renovation. Prefabricated housebuilding ended in 1990. Since then Prague and other large urban centres have experienced suburbanisation as the new middle class moved out of the city centre to higher quality housing (Illner and Andrle, 1994).

Conclusion

The planning system in the Czech Republic has become highly decentralised. A zoning system is in place, but it has not been strongly enforced, with the result that urban sprawl has become an issue in some areas. While there are no specific instruments or mechanisms to bring land forward for new housing development, the planning system has not acted as a constraint on growth. In this respect the Czech example is similar to Ireland, where lax controls led to an over-supply of new housing, often in the wrong places in terms of the availability of infrastructure including roads and community facilities. However the Czech economy has not been as buoyant in the past as Ireland, so over-supply has not been an issue. Equally, the stronger role for (semi-legal) self-build in the Czech republic has meant that new supply is generally forthcoming in response to demand, but raises problems over infrastructure and urban sprawl that may worsen in the future.

Denmark

Planning in Denmark is characterised by a top down structure and a strictly enforced land zoning system.

In 2007 Denmark reorganised its public sector following local administrative reform in 2005. All of the 14 *amter* (counties), which were the administrative units of the mainland, were abolished and replaced by five regions, which now act as the primary administrative units. The regions are led by directly elected representatives and elections are held every four years. Unlike the former counties, they have no power of taxation but receive subsidies from central government and contributions from *kommunes* (municipalities). At the local authority level, the previous 271 municipalities were merged into 98 larger municipalities. Public services are now provided by central government and municipalities, with the exception of healthcare which has became the major service provided by the regions.[2]

Planning system

Alongside the local government reform, there was a radical shift in Danish spatial planning which saw the former counties' responsibilities transferred to national and municipal authorities. The new municipalities acquired responsibilities for town and country land-use planning while the Ministry of the Environment created seven environmental centres across the country to ensure the realisation of national planning interests, removing planning decisions from the regions (Galland, 2012).

The spatial planning system in Denmark is relatively top-down (Busck *et al*., 2009). At the national level, the Ministry of the Environment prepares

national planning reports setting out the national spatial policies. Each municipal council prepare its own local plan.[3] However, the Ministry of Environment has the power to veto a municipal plan proposal if the proposal contradicts national interests, or to require a municipal council to prepare a plan with a specified content. In special cases, the Minister may intervene in municipal planning authority decisions and determine specific planning disputes.

Special mechanisms for growth control

Denmark uses a strict planning regime to control the location of housing development. The zoning law stipulates that urban growth can only take place in urban zones (Busck *et al*., 2009). In the Greater Copenhagen Area (*Egnsplan for Storkøbenhavn*), a large area consisting of 34 municipalities, the Finger Plan (*Fingerplanen*) which was introduced in 1947, stipulates that urban development is restricted to each of the 'fingers' served by collective rail transport ('S-tog') by preserving green areas between the 'fingers' (Vestergaard, 2009). Even though the municipalities were given increased planning powers and responsibilities as part of the structural reform, this region is governed by the Ministry of the Environment. As a result the municipalities in the Greater Copenhagen Area are experiencing greater state regulation of their planning decision making than elsewhere in Denmark (Olesen, 2010).

The approach to land supply in Denmark is not proactive, more reactive. Copenhagen for example does not own a lot of land and is very much dependent on private investors and landowners. In 2007 residents were involved in pre-planning a new town in the Copenhagen region. This is still a plan. However it has been shelved because of the economic crisis and the fact that the municipality did not control the land, which had been bought from the local farmers by a speculative investor.

At the moment, however, land supply is not an issue, as the housing market has collapsed. In the boom years many municipalities in the Copenhagen Region did not want to make building land available, as they were reluctant to increase the population with 'expensive households' needing childcare, more schools and other amenities. Eventually they started to release more serviced plots ready with infrastructure and so on, and quite a number of them have ended up with land they have invested in and cannot sell.

Provision of housing

The housing market in Denmark is characterised by substantial direct and indirect subsidies as well as regulation of all four main types of housing: owner-occupied housing, cooperative housing, social housing and private rental housing (Nielsen and Jensen, 2011). In Denmark, owner-occupied housing accounted for 50 per cent of all dwellings in 2011, and comprised a mix of single-family houses, multi-family houses and apartments. Cooperative housing, an alternative to conventional ownership – typically an apartment – accounted for 7 per cent of all dwellings. Social housing, supplied by non-profit housing associations, accounted for 19 per cent while privately rented housing accounted for another 14 per cent of all dwellings[4].

Affordable housing

The city of Copenhagen recently attempted to increase the amount of affordable housing by what has been termed the '5x5' initiative in which 5,000 apartments were to be built over 5 years at a monthly rent of 5,000 Danish kroner (approximately 645 euros). This was the election promise of

the new Mayor in 2005. However, once elected, the project proved more difficult to implement than expected, not least because of a legal challenge over the eligibility of the affordable housing provider selected to receive (cheap) public land. Instead it had to buy the land on the open market. Rapidly rising land prices had serious cost implications for the project.

To address the situation, the Affordable Housing Foundation – the private non-profit provider – decided to build a mix of market and affordable units, using receipts from the flats for sale to cross subsidise the '5x5' units. As a result the time span has exceeded the promised five years. The target group is key workers such as healthcare workers, teachers and police, and the first 12 units to be built were allocated by a lottery from the 1,500 eligible applicants in 2008. The homes were constructed using industrial building techniques to minimise costs, and rents will be kept at 20 percent of the target group's average earnings, rising with the cost of living (Danish Architecture Centre, 2012).

Conclusion

In conclusion, there appear to be no specific mechanisms for bringing forward land for housing development. Land value taxation, which taxes the 'unearned increment' in land values, has all but disappeared, and only a remnant remains in the form of a municipal real estate tax. Estimates of the long-run price elasticity of new housing supply produced for a recent OECD report (Andrews *et al.* 2011) showed that Denmark, at around 1.3, was third highest after the USA (2.0) and Sweden (1.4). The same study found Great Britain towards the tail of the distribution of 21 OECD countries, at less than 0.5. This suggests that Denmark's planning policies have not acted as a constraint to anything like the extent of those in Britain. It is possible that land value taxation had a positive effect in the past compared with the UK where land taxation policies have tended to constrain land supply and hence new housing development.

France

France is the largest of the European Union (EU) member states in terms of area and has a population of about 65 million, the second largest in the EU, behind Germany and just ahead of the UK.

The homeownership rate in France is below the European average, but has increased from 39 per cent in 1961 to 52 per cent in 1984 (Bonvalet and Lelièvre, 1997) and to 58 per cent in 2009 (France's National Institute of Statistics and Economic Studies, INSEE, 2009, www.insee.fr). Private rented dwellings made up 32 per cent of the stock in 1984 and fell to 24 per cent by 2009. Even so, private renting is still the second most common tenure in France. In 2009, the social rented sector accounted for 17 per cent of the country's housing stock.

Planning system

France has been promoting measures for the decentralisation of government since the 1950s but until the Defferre laws of 1982, the State presided over all aspects of planning and housing. With devolution, the local planning document, the *plan d'occupation des sols*, was no longer purely a production of central government and became a strong tool for the communes to determine their own planning. The State retreated to the background, retaining a role of support and compensation, mainly through subsidies.

Further reform in 2003–2004 continued an ongoing process of incremental change (Cole, 2006). Today there are several layers of government with a role in planning: the State, the *région*, the *département*, the *Intercommunalité* (including *métropole*) and the commune. As the term suggests, *Intercommunalités* are voluntary collaborations between communes, the smallest administrative units. Some of these are new, and one aim in introducing them has been to find the appropriate level of administration for different aspects of planning and housing provision, among other functions.

1. State

Although the State has limited intervention, it continues to define national priorities and objectives in relation to both planning and housing. On one hand, its key methods of influence relate to taxation (most recently the amendement Scellier, ending in December 2012, that will be replaced by a new investment incentive in 2013: le "Duflot") and granting subsidies through a local partner (*Département* and so on – see below) which include construction subsidies (*aides à la pierre*), rent subsidies (*aides personnalisées au logement*), and interest-free loans (PTZ+). On the other hand, the local representative of the state ensures the legality of planning documents and building permits, a posteriori (the *contrôle de légalité*)

The *Code de l'urbanisme* contains all legislation relating to planning. It was recently modified by the *loi Grenelle II* (2010), a law on environmental protection measures which created new standards for construction and the reduction of urban sprawl.

The '*loi SRU*' (2000) created new planning documents (SCOT (Schéma de Cohérence Territoriale), PLU) and prioritised densification of development. It also introduced an obligation to provide at least 20 percent social housing on all communes with over 3,500 inhabitants belonging to an agglomeration of communes (or *Intercommunalité*) of over fifty thousand with at least one commune of more than fifteen thousand inhabitants.

The latest housing plan contains more ambitious construction targets than those set by the previous government (five hundred thousand new housing units to be produced yearly), with stronger measures to ensure success, including fines for non-compliance with Article 55 of the *loi SRU*, plans for fiscal measures to combat holding onto land that is zoned for construction, and a stated intention to sell off State and local government land for housing construction at below market prices.

Several bills are currently progressing through parliament, containing these provisions: *loi de mobilisation sur le logement* (will be voted in January 2013), *loi de finances pour 2013* (fiscal measures, including new land taxation) and a new planning and housing act expected in the first part of 2013.

Planning laws have recently been relaxed. *Lotissement* (subdivision) came into force in March 2012 with the objective of 'simplification of laws concerning subdivisions; extension of a range of projects which do not require formal procedures; and reductions in the time needed for reviewing the planning application and for modifying the contents of applications for planning permission'.

2. Région

There are 22 regions in France, which define regional priorities for housing and make financial contributions.

3. Département
With the law *Libertés et Responsabilités Locales* (13 August 2004), the 100 départements in France were given a bigger role in housing. Départements are now involved in financing housing, creating guidelines, making a *plan départemental de l'habitat*, partnering with the State in providing a plan for marginalised groups, and managing debt repayment for those in difficulties with their mortgage (*fonds social pour le logement*).

4. Intercommunalité
An alternative to the forced merger of small municipalities, the number of *intercommunalités* has continued to increase and as of 1 January 2012 there were 2,581, covering 35,303 communes (roughly 96 per cent of all communes) (DGCL 2012).

A version of intercommunal cooperation has existed since 1890, but has been expanded several times, most recently in the *communauté d'agglomération* (1999). This level is considered optimal for resolving issues around housing needs, transport, internal migration, and population change. A *Programme Local de l'Habitat* (PLH) may also be created at this level, which can be accompanied by the right to distribute construction subsidies (*aides à la pierre*) in partnership with the State, or their own subsidies which help to develop social housing.

The *métropole* is the newest tier of administration created in 2010. The area of this entity must contain at least 500,000 inhabitants. As other *intercommunalités* it can be delegated the same functions as the commune in terms of planning (SCOT, PLU, PLH, ZAC, and land reserves). What is new about the *métropole* is that it can also be delegated competences usually reserved to *départements* or *régions* (such as transport or economic development).

5. Commune
The *commune* has held considerable powers over new construction and housing since 1982. However the State has exercised more power recently, imposing a requirement for 20 per cent of social housing in new developments (this will increase to 25 per cent in January 2013 when the *loi de la mobilisation sur le logement* is passed). Key responsibilities today include: financing housing, defining priorities, creating the PLH, and housing renewal (*opération programmée d'amélioration de l'habitat*). There has been a push to organise housing on larger scales, although the mean population of France's 36,000+ communes is over 1,700, half have populations of under 500 (INSEE, 2006).

Inter-communal cooperation

An increasing shift of responsibilities from the *commune* to the *intercommunalité* has occurred. The Isle de France region containing Paris has particularly high housing pressure (fewer than forty thousand housing units per year are built, whilst demand is estimated at around seventy thousand). Here there are plans for a new type of local government body dealing exclusively with housing, the *autorité organistrice du logement* (Institut d'Aménagement et d'Urbanisme de l'Île-de-France 2012). This body would bring together different levels of local government in the region, together with the State.

Two growing agencies in housing construction are the établissement public foncier (epf), which is aimed at preventing land banking, and the établissement public d'aménagement (epa), with a broader remit.

EPA are state agencies that intervene at the level of *intercommunalités* with strong powers to buy and sell land, including through compulsory purchase. They can act across localities such as La Defence de Villette, broader areas such as EPA Pleine de France (established in 2002) or on a regional scale such as Nord Pas de Calais. They are seen as carrying out operations of national interest and so supersede local considerations.

There are two types of EPF: state EPF and local EPF. The first are created by a 'council of state' decree, and most of the time, they have a regional scope. The second are more dependant on the local governments that created them. They often have an *intercommunalité* or an inter-communal scope.

Those agencies are financially autonomous vehicles, allowing a pooling of resources of communes within a large perimeter. As agents at the service of local government planning policy they are considered powerful in medium to long-term planning, as well as providing a guard against property speculation.

Tools available to these agencies include negotiation of sales of land, expropriation and pre-emption. Their number has steadily increased over the last ten years, in response to a rising demand for housing which private development was failing to meet.

Overall, the French planning system rests upon a complex governance system, with multiple actors and overlapping responsibilities. In some areas, strong regional authorities have emerged as strategic coordinators and lead local authorities; in others, city governments are more innovative and influential than distant regions or subservient *départements* (Cole, 2006).

There is a kind of consensus among planners and central government that planning tools, particularly building permits, should be the prerogative of *intercommunalités*, at least at that level or a higher one. However, most of the communes are not ready to allow their existing powers to be taken away.

Fiscal tools: Incentives and redistribution through housing subsidies and taxes

A variety of fiscal measures are used to subsidise the housing market:

Aides à la pierre is a subsidy generally reserved for the construction of social housing, and is awarded directly to the developer. Although it was a main source of funding between the 1950s an 1970s, it is now on the decline.

Aides personnalisées au logement (reformed in 1977) is a subsidy applied to rental housing, based on the tenant's income.

Prêt à taux zéro and PTZ+[5] is an interest-free loan to assist potential homebuyers that has been expanded over the years. It could be applied to new-build or second-hand housing until the end of 2011, but is now only concerned with new development. Around 80 per cent of the French population was eligible for assistance (Rolland 2011) before this device was reformed in 2012.

Amendement Scellier: This is a tax reduction for private landlords of around 22 per cent (depending on the type of unit and the lease offered) of the value of the property (up to €300,000), with the stipulation that the property will be leased to low income households for at least nine years. The *Duflot*, which is planned to replace this mechanism in 2013, will be focused on social housing: so, for example, the rent level will be lower than under the Scellier.

The *Réforme de la fiscalité de l'aménagement* merged several taxes and fiscal devices (*Programme d'Aménagement d'Ensemble*), including the *taxe locale d'équipement* into a *taxe d'aménagement* (TA) and created a *versement pour sous-densité* (VSD) in March 2012. The reform simplifies taxation, but is also intended to promote the construction of new housing.

The *taxe foncière* is a property tax. The last time that the State appraised the rental value of properties was in 1961 for land and 1971 for buildings. Such an appraisal is not easy because land markets are characteristically opaque, especially in France. The lack of clarity over valuation contributes to property bubbles (Renard, 2003). As a result, property taxes are calculated on a basis that does not match with real value. Thus, when prices rise, the tax remains the same, acting as an incentive to withhold land from the market until prices are very high (Renard, 2005).

In the new *projet de loi de finances pour 2013*, a revision of the taxes on urban land is proposed, to encourage owners to sell their land.

Special mechanisms for growth control

Current housing policy in France faces two main challenges:

- new housing is not necessarily being built where demand is strongest (Ile-de-France, for example), but in areas with abundant space as well as attractiveness (as migration figures show, Baccaïni and Levy 2009);
- the way urbanisation is carried out is more like a splitting-up than sprawling, in the continuation of urban spaces, despite a national policy of densification backed up by incentives as well as regulation (Castel, 2010).

One solution being considered is for the State to become more directly involved in housing. The main focus has been on ensuring that housing is built where it is needed (rather than controlling its development elsewhere). There has been a growing trend in the last decade to use development vehicles, which can be formed by the State or by the *intercommunalité*. Their efficacy in bringing together resources to redevelop large zones (often either post-industrial, or with fragmentary ownership and poorly managed), with lower risk and more independence from short economic cycles, means that they are increasingly being created and opening a space for longer-term State and intercommunal intervention in planning. Moreover, the new minister for housing, Cécile Duflot, has indicated plans for the State to intervene in development by making more publicly-owned land available low prices and by freezing certain rents (Franqueville, 2012).

Measures have also been introduced to reduce urban sprawl. Over the last decade, French cities have witnessed a two-way movement. On the one hand, higher income households have been moving into city centres (gentrification) and, on the other hand, middle and lower income households have been forced to live further away from cities to find housing, especially if they want to become owner-occupiers. The French government has therefore tried to tackle the resulting urban sprawl both through planning legislation and by encouraging co-operation between municipalities (Petitet and Guet, 2008). Renard (2006) has suggested that the SRU 2000, which seeks to reduce urban sprawl by making brownfield construction and urban renewal easier, is not as effective as it could be because urban renewal requires so much more technical and financial support.

SCOT is a planning tool to encourage the cooperation between municipalities to implement a strategic vision for a metropolitan area on

an inter-municipal scale. It also gives general guidelines on sustainable development and restraining urban sprawl. At the local level, the PLU is the key document that determines land use regulations and building authorisations, and in fact where and how dwellings and other buildings will be built. Petitet and Guet (2008) argue that closer co-ordination between SCOT and PLU is key to restraining urban sprawl. It is also argued that planning policies must take into account the economic dimension of urbanisation. For example, Castel (2012) shows that densification in the form of apartment blocks is more resource-expensive than building individual houses.

The *Code de l'urbanisme*, modified by the *loi Grenelle II* (12 July 2010), also contains environmental protection measures.

Compulsory purchase of land and properties

'Pre-emption' is a softer form of expropriation and may be used by *communes* or *intercommunalités* to acquire property that is for sale, including that owned by the State. It is very rarely used. A study carried out by Adef (2007) estimated that about 3 per cent of public purchases are achieved under pre-emption. However, its application has such a broad definition that it has been used in certain cases to prevent property improvements, instead of being used to carry out significant urban renewal or new construction[6].

Expropriation may only be used or delegated by the State, and only where it serves general interest. Although it is not used very often, it is still a controversial issue. As Renard (2009) shows in 'Evaluation foncière pour l'expropriation', the owner of the property had (until 2005) no access to information regarding market prices, and thus was unfairly disadvantaged during hearings.

Transport infrastructure

First introduced in 1971 for Paris, the 'versement transport' (VT) is a payroll tax hypothecated to public transit. It is justified in terms of higher productivity benefits to employers and employees located in cities because of agglomeration economies. Both employers and employees benefit via the transport system from access to a larger labour market (Bout and Hensher, 2007). The rate of tax (in 2002) ranged from 0.55 per cent of payroll in towns between ten thousand and a hundred thousand, one per cent for those over a hundred thousand and the outer suburbs of Paris, 1.6 per cent in the inner suburbs and 2.5 per cent in central Paris. It has been argued that the availability of substantial sums through the VT has encouraged administrators to spend it (Bout and Hensher, 2007). However, it can also be argued that VT has enabled the development of an efficient public transport system that partly compensates for the pull of decentralisation. The RER in Paris is cited as a good example (Bout and Hensher, 2007).

Provision of housing and related infrastructure

Until recently, funding for infrastructure associated with housing development came from a variety of sources:

Tax locale d'equipment

This was a tax to compensate the *Commune* for the costs of the development of local infrastructure. The tax varies but was around one to five per cent of the value of the development. It was paid in two instalments: the first within 18 months of planning permission being granted and the second within 36 months. In 2007, it raised €635 million nationally, before dropping to roughly

half this amount by 2010 as the financial crisis hit the construction industry (Corry *et al*., 2012).

Taxe départementale des espaces naturels sensibles
This was a similar tax on developers to compensate the *Commune* for the upkeep of open spaces and forests. It was valued at one per cent of the value of the development.

Taxe départementale pour le financement des dépenses des conseils d'architecte, d'urbanisme et de l'environnement (TDCAUE)
This was a tax on new buildings, charged at a rate of 0.3 per cent of the development value, to fund the free architectural and planning advice service for the *Commune*..

A simplified system

In March 2012, seven of the eight local taxes (including all the above taxes) were merged into the *la taxe d'aménagement* (TA) and all developments have been subject to this new tax. The French government also introduced an additional payment for low density developments (VSD).[7] The VSD is largely a deterrent to urban sprawl while the TA can be used by the *commune* to create infrastructure. Unlike their predecessors, the TA and VSD apply to all *communes* with a planning document, not just those with more than 10,000 inhabitants. The *commune* can also fix the rate of taxation at different levels depending on the zone within the *commune* and development priorities.

These financial incentives have been found to have a positive effect on residents' views on development (Corry *et al*., 2012). This is because in France, *communes* are small enough and close enough that residents can see the taxation being spent on local facilities. This has not been observed in England, possibly because local authorities are large and the fruits of any developer payments are too remote to produce the same effect.

Conclusion

While the French planning system is complex and decisions are made at a number of different levels, it has the possibility for governments at all levels, including national, to become actively involved in land assembly and the provision of public land at low prices. Currently there is considerable concern about the collapse of the housing market caused by the global financial crisis and new legislation is being introduced to encourage municipalities to deliver more housing and to provide 25 per cent social housing on all new developments.

France has large scale municipal land assembly, and has used the land readjustment mechanism or 'pooling' described in previous JRF reports (see for example Barlow *et al.,* 2002*)* but on a voluntary basis, as compared to Germany where it is a legally binding mechanism. Large sites are brought together with an infrastructure plan to ensure that the necessary services are in place ahead of time. There is also a national employment tax which is hypothecated on financing transport infrastructure provision.

Germany

Germany's economic development has recently been characterised by growing regional disparities, with stronger growth in the west and southwest, especially along the Rhine, Main and Neckar rivers and Bavaria, than in the north (with the exception of the city of Hamburg) and east.

Germany has a large private rented sector which has remained fairly stable over the past three decades, Some 49 per cent of the total housing stock was private rented in 2005 (Kemp and Kofner, 2010), while subsidised dwellings (and dwellings subject to rent regulation and administrative tenant allocation) comprised 14 per cent of the total stock. While homeownership has increased in the former East Germany, the impact of this on Germany as a whole is limited by the relatively small proportion of the total population living in this region.

Planning system

In Germany, planning occurs within a decentralised decision-making structure and a strong legal framework (Pütz *et al*., 2011). The primary actors involved in the process are the federal government (*Bund*), the 16 state governments (*Länder*), the 114 planning regions and approximately 14,000 municipalities (*Gemeinde*). In recent years, the European Union (EU) has also played an increasing, but non-binding, role.

The federal government (*Bund*) does not create or implement plans, but sets the overall framework and policy structure to ensure consistency for state, regional and local planning (Schmidt and Buehler, 2007), while states, regions and municipalities are the actual planning bodies. The federal level of spatial planning (*Bundesraumordnung*) has limited authority.

The Federal Spatial Planning Act provides a framework for the 16 state governments (*Länder)* to exercise spatial planning at the state level. Planning takes different forms in each *Länder*, and the weight given to spatial planning at this level differs from state to state (Kunzmann, 2001). The state governments administer financial incentives to development provided by the federal government, supplementing them with their own resources. They set quantitative housing targets which the municipalities (*Gemeinde*) then translate into land-use plans (*Flächennutzungspläne*). These plans indicate where housing may be built (Needham, 2012a).

Recently, both Germany and the EU have placed increased emphasis on regions, as opposed to individual cities or the national economy, as the appropriate scale through which to encourage development (Schmidt and Buehler, 2007). The main task of regional planning is to establish Regional Plans which are usually part mandatory on local governments and part advisory. Further regional planning tasks include participating in the setting of planning objectives at the local level and establishing sectoral plans and programmes, as well as involvement in regional planning and urban land use planning procedures (Pütz *et al*., 2011).

While the German Constitution guarantees municipalities the right to independent self-government, in reality municipalities operate within a planning system that requires the cooperation of all levels of government. As such, decisions concerning land use, taxation and economic development usually have to be consistent with the wider regional, state and national framework (Schmidt and Buehler, 2007).

Municipal land-use planning is regulated by the Federal Building Code which includes regulations on the content and procedures related to the preparation of local land-use plans and rules for assessing development proposals outside areas covered by these plans. The municipal administration produces preparatory land use plans – (*Flächenutzungsplan*) and the binding urban land use plan – *Bebauungsplan*. Taken together, these are the most influential instruments in terms of land-use planning in Germany. This lowest planning level is responsible for a large number of site-specific recommendations and measures, and adds greater detail to the provisions of the higher planning levels. The preparatory land use plans set out

the municipalities' objectives for future land use and preliminary zone designations for settlement development and for other types of land use. In contrast, the urban land use plans contain binding designations for all urban development at municipal level (Pütz *et al*., 2011).

Special mechanisms for growth control

Compensation for the loss of open soil and land

The German spatial planning and development control system does not contain any regulations or policies for the containment of urban growth, although the German Federal Building Code, the core document of the statutory planning legislation, states that land shall be used sparingly and with due consideration (Baing, 2010). The legislation also has an emphasis on reusing land, infill development and minimising the loss of soil. Many of these regulations are linked to support the policy objective of '*Bodenschutz*' (soil protection). The focus is thus less on wider spatial planning objectives but more on avoiding specific loss of soil functions.

A unique element of the German planning system is the *BauGB* §1a which contains a regulation to compensate '*Eingriffe in Natur und Landschaft*' (intrusions into nature and landscape). This compensation for the loss of open soil and land either takes place in the same spatial and functional context as the plan location, or is pooled to allow landscape improvements on a larger scale (Baing, 2010).

Brownfield development

However, these environmental constraints did not prevent extensive urban sprawl during the 1990s. The 2002 National Strategy for Sustainable Development aimed to reduce of the rate of urban expansion from 100 to 30 hectares a day by 2020 (Baing, 2010). The policy framework was updated with measures favouring development inside existing urban areas. To encourage redevelopment inside urban areas, the new *BauGB* has a simplified process for schemes up to 20,000 m^2 without the requirement of a formal strategic environmental assessment and there is no need for compensation measures for intrusion into the landscape. For sites from 20,000 m^2 up to 70,000 m^2, a simplified pre-test ruling out environmental impacts is sufficient. Also, the local authority Preparatory Land Use Plans do not need to be formally adjusted in these cases. The simplified planning process inside urban areas is intended to make it quicker and more economically viable for investors to develop there (Baing, 2010).

Special mechanisms to increase land supply

Land readjustment

When the ownership of land in a development location is very fragmented within or on the edge of the built-up area (because agricultural holdings are often very small), the government can initiate land readjustment (Hayashi, 2000). Land readjustment was initially aimed to readjust rural land for development but was extended in 1940 to readjust built-up land. Then in the 1960s a new Federal Building Act was used to provide large scale urban development land for residential areas. In the 1970s, its purpose changed to the redevelopment of inner city areas and in the 1990s it changed again in order to address housing shortages as well as to provide land for industries and office buildings (Hayashi, 2000).

Land readjustment can be done either by voluntary arrangements or through compulsory measures if voluntary agreement cannot be achieved (Supriatna, 2011). Land readjustment is one of the main instruments of local planning today.

Land readjustment can be a total reallocation of land to provide owners with plots suitable for building on and to provide the municipality with land for local infrastructure. It can also be a more limited adjustment of adjacent plot boundaries (Konursay, 2004). This allows the municipality to influence the form of development, recoup the costs of servicing and infrastructure, and possibly to receive some of the uplift in land value, as well as to remove delays caused by a lack of infrastructure.

However, there can be difficulties in bringing land forward because of regional or local government reluctance to allocate land of any kind in their plans. This occurs for example in high demand areas where there are planning constraints on suburban expansion in more urbanised regions because of regional planning policy preferences to protect green space (Ball, 2012).

Circular land use management

Circular land use management was introduced in 2002 as a key policy to reduce land utilisation (that is, they reduce the land 'take' for housing by increasing the density of development – densification in the UK context). It builds on the concept of a use cycle from the allocation of building land, through its development, use, eventual abandonment and re-use. It allows for zoning new land for development on a small scale under certain conditions. This strategy aims to reduce new development on greenfield sites and to re-use previously developed (brownfield) land (Preuß and Ferber, 2006).

Preuß and Ferber (2008) used simulation methods to test the use of this approach in five regions. Their results suggested that economic instruments for circular land use management need a mix of policies to:

1. influence property prices (for example by reforming the property tax system or land-transfer tax reform) to roll back/decrease the incentives to build on previously undeveloped sites for public and private parties who want to build;
2. introduce price mechanisms for zoning new land for development (such as establishing tradeable land-use certificates or apportion building land for zoning in combination with cost-benefit analysis) to further motivate municipalities to encourage development in previously developed land; and
3. create financing options and tailor funding measures to suit circular land use management (for example by reforming the fiscal equalisation scheme at municipal level, low-interest loans, real estate funds, demolition liability insurance, and subsidising re-naturalisation) to greatly strengthen development on previously developed land.

They also found that a circular land use management policy requires cooperation between the German federal government and other important groups of stakeholders – the *Länder*, public stakeholders at the municipal and regional levels, private enterprise, institutions which own land, the real estate industry and private households and small-scale property owners – in order to establish appropriate framework conditions for circular land use management.

Provision of housing and related infrastructure

Because plan formation tends to involve extensive negotiation between a wide variety of local agencies and subsidy commitments by some levels of government in order to achieve desired planning outcomes, Ball (2012)

comments that Germany has had a belated response to sudden increases in housing demand. Also, some local authorities are hesitant to sanction land release for housing construction because they are concerned they will have to bear the full infrastructure costs associated with suburban expansion. This is because of the lengthy and uncertain period before revenue receipts from property taxes and state subventions become available as a consequence of those investments.

It is now government policy to stimulate housing building within the existing built-up area, especially through regeneration projects in the east and north of the country. Municipalities have a high degree of government involvement in the housing development process (Schmidt and Buehler, 2007). They often acquire or own property and can supply housing land actively by offering it from their own land banks and by releasing their land holdings in the built-up area. Also, they can designate urban redevelopment zones where development is desired but is not taking place (such as large derelict sites and greenfield sites) by purchasing all the land, at existing use value (Baing, 2010).

While a developer acquires the building site, it is the responsibility of the municipality to service the land and provide the infrastructure (streets, parking areas, technical services, green space, and also 'social infrastructure' such as playgrounds). This puts municipalities in a strong position to influence common facilities and to recoup the related costs. The applicant for a building permit on such a site is required to contribute to those costs, to a maximum of 90 per cent, with the remaining costs (at least 10 per cent) paid by the municipality (Needham, 2010). The actual provision of the infrastructure is commissioned by the municipality. In addition, the owner has to pay the costs of measures to compensate for any destruction of nature and landscape caused by the development (Baing, 2010). However, if the municipality demands too much, land will not be brought onto the market.

There are also a range of loans, subsidies, and cheap building land available for constructing both owner-occupied and rented housing, which are targeted at households with a limited income (Needham, 2012).

Informal planning

Municipalities in Germany have a range of different formal and informal instruments to ensure that there is sufficient land for building activities. Unlike formal planning, informal planning has no rigid legal framework. It plays a very important role because development is often easier to control by non-formal planning. Informal planning often complements formal planning, helping with planning decisions in different ways. It can include urban building designs, general land use plans, development plans, special expert reports and urban construction and architectural competitions. The equivalent instrument in the UK would probably be the use of pre-application discussions, but in Germany this informal planning is far more extensive.

Conclusions

There appear to be two main mechanisms for bringing land forward for housing (and other) development in constrained areas in Germany that are relevant to the UK (apart from informal discussions between key actors). One is land readjustment, much noted in the literature, while the other is an approach to land management based on the 'natural' life cycle of land uses over time – circular land use – which aims to reduce the take-up of land by replacing low density housing with higher density buildings. Both approaches are already used to some extent in the UK, although the different

institutional and planning context means that neither are necessarily seen as part of the standard toolkit of local planners.

In terms of the responsiveness of supply to changes in demand, the OECD estimates of the price elasticity of supply suggest that Germany is only slightly more responsive than the UK – at 0.43 compared to 0.41 (Andrews *et al.*, 2011b).

Netherlands

Owner-occupation in the Netherlands has risen from 45 per cent in 1990 to 57 per cent in 2010. Social renting declined over this period from more than 40 per cent to 35 per cent in 2010 (Andrews *et al.*, 2011a). Private renting also fell from 17 per cent in 1980 (Van der Heijden and Boelhouwer, 1996) to only 8 per cent in 2010 (Andrews *et al.*, 2011a).

More generally, the Dutch are not building enough houses to meet identified future demand. Current levels of output have fallen to around 20,000 units a year, compared with 60,000 in the recent past. The reason is not land supply, but a lack of effective demand. Developers do not build what they think they will be unable to sell. Limited land supply is a key issue when demand is higher.

Planning system

The Netherlands has a three-tiered planning system with a strong emphasis on local decision-making, formal proceedings and informal consultation between levels (Busck *et al.*, 2009). Dutch provinces and municipalities all have the same statutory powers, including those to purchase undeveloped land, install the necessary services and parcel it up for sale to private developers at a price that covers the costs. However, in recent years there has been a move away from public sector led development to more market oriented approaches.

The *New Spatial Planning Act 2008* gave greater powers to central government as the expense of the municipalities. State, province and municipality have to deliver their spatial policy in one new instrument, the structure vision, which is intended to reduce intervention from different government levels. The municipal land use plan has been retained as the most important planning instrument. It covers the whole municipal territory and must be revised every 10 years. Current policy and practice, however, emphasises decentralisation of implementation and the reduction of regulations.

Special mechanisms for growth control

Dutch cities have strong initiatives to control urban sprawl and prevent ribbon development (Zonneveld, 2007; Halleux *et al.*, 2012). Current planning for urban development has been focused on concentrating development in the Randstad, a poly-nuclear pattern of urban centres in the western part of the Netherlands (including the major cities of Amsterdam, Rotterdam, The Hague and Utrecht plus a substantial number of smaller cities). The Randstad encircles a rural area where a few small towns and numerous villages are located.

In the 1970s and 1980s, spatial planning focused strongly on 'clustered/concentrated deconcentration' of new housing construction, designed to channel suburban extensions into designated 'growth centres' (Dieleman *et al.*, 1999). In the mid-1980s, national policy against sprawl evolved with a

tendency for stricter control, and the 'concentrated deconcentration' policy was replaced by the 'compact city' policy (Geurs and van Wee, 2006).

Compact city policy

The compact city policy is a key element of Dutch urban planning (KorthalsAltes and Tambach, 2008). It was originally a local initiative facilitated by central government through the provision of urban development grants and by developing policy to create high urban densities, so that open space outside of cities could be preserved. Building on previously developed land is a top priority (KorthalsAltes, 2007). This meant that in the major cities such as Amsterdam, Rotterdam and The Hague a period of decline during the 1970s was followed by substantial growth in the 1980s, 1990s and early 2000s. In 2004, the Dutch Government set a target of 25 per cent to 40 per cent (depending on the region) of all houses to be built within the existing built-up area (Halleux *et al*., 2012) and nearly all regions succeeded in achieving this target, with some managing even more than 40 per cent (Buitelaar, 2012).

Through the compact city policy, housing growth was concentrated in 26 urban regions. Within these regions the first priority was to build on locations within built up areas. The second priority was greenfield land directly adjoining the central city, preferably within cycling distance. The third priority was areas adjoining other towns and villages in the urban region, such as the former growth centres (KorthalsAltes, 2007).

The compact city policy succeeded in producing a large increase in housing within cities during the 1980s, when major state funding was made available for urban renewal. Within a 10-year period, a total of some 227,200 dwellings were built on these sites in relatively compact form (Dieleman *et al*., 1999).

Provision of housing and related infrastructure

In the past, there were strong links between planning and housing policies, with a single ministry responsible for both housing policy and spatial planning (Priemus, 1998). The supply of residential land was controlled by municipal governments, focusing on providing accommodation to meet housing needs (Vermeulen and Rouwendal, 2007). This was achieved through the 'active land policy' (Buitelaar, 2010) in which the bulk of the land designated for urbanisation was bought and sold by municipal land companies (van der Valk, 2002).This meant that local authorities owned virtually all the land for development, and they bought land, subdivided it, provided the infrastructure and the utilities, and sold off the subdivided plots to those who built the dwellings, such as property developers, housing associations or owner-occupiers.

Local authorities could use the municipal pre-emption right (compulsory purchase) to facilitate land assembly by designating an area within which a landowner who wanted to sell their property was obliged to offer it first to the municipality (Buitelaar, 2010). Initially this only applied to urban renewal areas but when land assembly for urban extension areas was inhibited by private land acquisition and speculation in the 1990s which led to rising land prices, the law was changed and its application was extended to greenfield locations. Between 2000 and 2006, the use of pre-emption rights doubled from 33 per cent of all municipalities in 2000 to 68 per cent in 2006, or from a total of 22,700 hectares to 40,800 hectares (Buitelaar, 2010).

Historically, housing associations have been the providers of affordable housing in the Netherlands, mainly taking the form of social rented housing. They were directly subsidised by central government but also relied on

local authorities, particularly for land. In the early 1990s, government subsidies for housing construction were removed and housing associations were liberalised. The proportion of low-cost social housing in the housing programme fell from 73 per cent in 1991 to 18 per cent in 2001 (KorthalsAltes, 2007).The provision of housing and local infrastructure shifted away from the municipalities towards regional governments, property developers and housing associations.

Municipalities were forced to withdraw from the land market to some extent and housing associations became less dependent on them for the acquisition of land. In addition, as land values increased, local authorities became less willing to buy land explicitly for social housing. Housing associations instead acquire land directly from property developers or individual landowners such as farmers. Around 1995, 60 per cent of their land had been bought from local authorities; by 2008 this had fallen to less than 15 per cent (Buitelaar, 2010). Currently, housing associations receive no subsidies (with the exception of housing for special needs) and every unit built makes a loss (the capitalised rental income is less than the costs of construction and maintenance) even when land is purchased relatively cheaply. Housing associations can raise loans on the security of their housing stock at a reduced rate, because of public guarantees, and they cover the losses out of reserves, by selling existing housing (the historic costs are much less than the market value), or by building expensive housing for sale.

In the construction of new dwellings, developers and municipalities negotiate an agreement about the amount and type of housing to be built, and also about who will service the land and provide the infrastructure, on- and off-site. The agreement may include provisions for the amount and price of land for social housing. Negotiations with municipalities often take years (Needham, 2012a). Only after the agreement has been legally concluded does the municipality change the land-use plan in accordance with the contents of the agreement. If an agreement cannot be reached, the municipality will make a new land-use plan which can include (since 2008) requirements to provide land for social housing and contributions to land servicing and infrastructure. On redevelopment sites, a subsidy towards the costs of acquisition, servicing and infrastructure will often be necessary. If the municipality has supplied some of the land, then the financial arrangements will include how the income from land disposal is to be divided between developers and municipality (Needham, 2012a).

Financial incentives to local residents for housing development

The Netherlands is one of the few countries which offers compensation for 'worsenment', that is, loss of value because of a new land-use plan. Residents can apply to the local authority for compensation if they believe they will be detrimentally affected by a planning permission. Such compensation is regulated under article 6.1 in the New Spatial Planning Act 2008 (Corry *et al*., 2012). Once planning is approved, independent experts assess the amount of compensation. Compensation is paid by the local authority, but in practice, where there is a financial arrangement made in advance to cover the whole plan area, many developers will reimburse the municipalities for these costs through voluntary agreements. The amount depends on the nature of the detriment and the type of development, with an average payment of around €10,000 per case, while the total amount of compensation awarded for the whole country is estimated to be €20 million per year. The total compensation cost accounts to a minor proportion of the total investment in construction which was estimated at €55 billion in 2004 (Corry *et al*., 2012).

However, the practical importance is very small. There are all sorts of limits on how much may be paid out, and anyone claiming worsenment has to deposit a sum of money in advance to discourage frivolous claims. It is not generally seen as an incentive to local residents to welcome new housing development (Needham, 2012b).

Conclusions

The Netherlands is a small, crowded country that is much more densely populated than the UK. There are two key mechanisms that might be relevant to the UK in terms of ensuring that sufficient land is made available and developed for housing. The first is the active practice by municipalities to acquire land, service it, parcel it up and sell it on to developers and housing associations at prices that cover costs of the infrastructure and services. More recently this approach has been somewhat undermined by developers purchasing land from farmers before it has been zoned or allocated in local plans. As a result, the Dutch have explored other ways to cover the costs of service provision, including S106 in the UK, and the New Act has introduced similar powers with what are termed land servicing agreements. They operate very similarly to S106 but are restricted to infrastructure and service provision rather than affordable housing.

The second is the payment of compensation to individuals suffering detriment from new development. It has been claimed that this has reduced local opposition to development, or NIMBYism. There is some evidence from the USA that those suffering detriment (by, for example, reduced house prices) are confined to locations in the close vicinity of the development, and the impact quickly dies away with distance (Corry *et al*., 2012). Corry *et al*. (2012) argue that individual compensation is an affordable way for either local authorities or developers to ensure that new housing is built in appropriate locations. Needham (personal communication, 2012) responds however that the payment of compensation is not relevant as an incentive to encourage development.

New Zealand

Housing affordability is an increasing problem in New Zealand. The homeownership rate declined from 73.8 per cent in 1991 to 66.9 per cent in 2006 and is projected to fall further to 61.9 per cent by 2016, particularly for younger households who cannot afford homeownership (Department of Building and Housing, 2011). Declining home ownership has been accompanied by an increase in private renting and in the number of houses owned by investors with small portfolios. Recent research in New Zealand suggests that this increase in buy-to-let has raised prices for homes and further displaces first time buyers from owning (Maclennan, 2008a).

Planning system

The existing framework for regional and urban planning and development is predominantly guided by three different pieces of legislation. The Local Government Act 2002 (LGA) provides for councils' infrastructure and investment over a 10-year period. It also includes a requirement that local authorities take into account '...the reasonable foreseeable needs of future generations' (Section 14 (g) (iii)) which makes it a long term future planning act in terms of investment although it is enabling legislation with no specific focus on land use planning.

The Resource Management Act 1991 (RMA) addresses land-use development and promotes the sustainable management of natural and physical resources. Under the RMA land is zoned for a particular level and intensity of regional development, and the development rights belong to the owners of zoned land. If the zoning changes, whether through a change in a District Plan or via a 'resource consent' (planning permission) all of the increases in development rights accrue to the landowner.

The RMA sets out a 'hierarchy' of planning/statutory instruments including (Hill, 2008):

- National Policy Statements (NPS) – central government (although these are restricted to freshwater management, electricity transmission and renewable energy plus a Coastal Policy Statement).
- Regional Policy Statements (RPS) – regional council.
- Regional and District Plans (RPs and DPs) – regional, district and city council

The Land Transport Management Act 2003 (LTMA) provides the system for national and regional transport strategy, planning and funding.

Each Act has different legal purposes, processes and criteria and they have been criticised as failing to work together as a complete urban planning system, resulting in duplication, lack of clarity and investment of time and resources from all actors involved (Pollock, 2008). Nevertheless, the RMA was seen as pioneering when it was introduced because it brought together a wide range of issues that had been scattered between different departments and agencies, including land use, forestry, pollution, traffic, zoning, water and air. It also introduced the concept of 'sustainable management' to the heart of the regulatory framework to direct all other policies, standards, plans and decision making, something unique at the time (Fisher, 1991).

The planning system is predicated on central government playing the multiple roles of a policy maker, regulator, developer, investor and capability builder, as well as an implementer and deliverer of infrastructure and services. Central government provides the bulk of public expenditure in urban areas. More than 40 per cent of central government's capital expenditure for transport, housing and education is in Auckland, reflecting the fact that Auckland has a third of New Zealand's population and is the fastest growing region. The government's National Infrastructure Plan, released in March 2010, sets out national infrastructure investment for the next 20 years.[8]

At regional level, regional councils prepare RPSs. In urban areas these may address urban growth management, and may utilise a Metropolitan Urban Limit as a policy tool to combat urban sprawl.

At local level, the 85 local authorities each adopt their own unique approaches. This leads to variability and inconsistency, which creates duplication of effort in resolving common issues, unnecessarily increasing the cost and time local authorities and submitters spend on the plan preparation process (Pollock, 2008).

The Environment Court, established under the RMA in 1996, plays an important role in the planning system. Virtually all processes and decisions made under the RMA, including regional policy statements, regional and district plans, resource consents, and water conservation orders, may be appealed to the Environment Court. The court hears appeals on a 'de novo' basis, that is, it does not review the original decision, it hears any evidence it requires and makes its own decision which replaces the earlier one (Birdsong, 1998). It also has the power to make declarations that interpret the law under the RMA. However, local authorities can appeal decisions

of the Environment Court to the High Court, for example, in order to clarify the law. Thus Marlborough Council is currently planning to appeal an Environment Court decision that a boat-building yard in a residential zone had not breached a certificate of existing use because the owner had started operating within 12 months of the previous owner leaving (news item, Marlborough Express, 12/9/2012). The council said they would appeal to gain clarity over the weight given to different planning tools. This decision gave greater weight to the existing use certificate, where normally the business would need to apply for a resource consent in the normal way.

Special mechanisms for growth control

The Auckland Region is the largest urban centre in New Zealand. About 30 per cent of the New Zealand population and 29 per cent of New Zealand's dwellings are located there. Land supply in the region is constrained by the Metropolitan Urban Limit (MUL) which divides urban and rural land uses to protect the region's natural and heritage resources. The MUL will be replaced by a Rural-Urban Boundary (RUB) in 2013.

Metropolitan Urban Limit (MUL)

There has been some form of metropolitan growth boundary in Auckland for 50 or more years. The 1995 Auckland RPS established an urban growth boundary as a Metropolitan Urban Limit (MUL) as part of a voluntary agreement between all the municipalities in the region to coordinate and manage growth. The Auckland Regional Growth Strategy 1999 set out a framework reconfirming the MUL and identifying areas for redevelopment, intensification and infill development within the existing built up areas of the region. The MUL defines the extent of urban zoning that is allowed in the region. Progressively extending the MUL would facilitate the re-zoning of land from rural to urban use, and would increase the supply of residential land in the region.

Before 1999, there were no significant increases in the MUL and most of the growth was accommodated within the limits. Since then the MUL has been extended eight times to add nearly two thousand hectares of land (Hill, 2008), but overall, Auckland's urban area has largely been contained inside the MUL.

Rural-Urban Boundary (RUB)

In 2010, all eight local councils in the Auckland region were merged into one new council, the Auckland Council, and required to develop a spatial plan. This plan, the Auckland Plan 2012–2040, was released in 2012 and sets out a long term strategy for the region's growth and development. It reconfirmed the MUL approach for a region that is projected to expand in population from 1.5m in 2010 to 2.5m in 2040. Most of this growth is planned to take place within the existing zoned areas and mechanisms have been put in place to upgrade infrastructure and re-zone land within the MUL, focusing on town centres and urban transport routes. This is as a precursor to the proposed Unitary Plan which will replace the seven district plans made under the Resource Management Act 1991 to control land use in the Auckland area. The Unitary Plan is planned for release in the first quarter of 2013.

A new rural-urban boundary will be adopted and the areas between the 2010 MUL and the 2040 RUB will be subject to staged release of greenfield areas approximately every 10 years in response to population growth. This will ensure that there is always a 20 year forward supply of development capacity and an average of seven years unconstrained land supply with zoning and bulk services infrastructure in place. Unlike the MUL which has

been extended eight times since 1999, the RUB will be fixed. The objective is to ensure that growth over the Plan's 30 year life occurs predominately within the boundaries of the RUB. Greater outward growth is anticipated during the Plan's first decade, with a gradual shift toward intensification over its 30 year lifespan. The precise placement of the RUB is currently being established (source: personal communication with Patricia Austin, February 2013).

Impact of urban growth boundary

During the 40 year period to the mid-1990s, the urban boundary appears to have had almost no role at all in preventing land being brought forward for residential development, as there seems to have been over-capacity in the system. A report on the MUL in 1998 noted that 'in the past it was accepted that the line would be moved ahead of development with a lead-in time of at least 20 years. The line has not moved significantly in the past 40 years and capacities now range from 12–24 years... depending on growth rate assumptions' (Auckland Regional Council, 1999, p. 15). However, as noted above, since 1999 the line has been extended eight times in response to more recent growth pressures (Hill, 2008).

Recently, with increased population growth in the region, the MUL's impact has been questioned. The issues are whether there is an adequate supply of residential land; the impact of the MUL on land prices either side of the boundary; and whether developers have taken up opportunities to redevelop within existing urban areas at higher densities.

The evidence

The Department of Building and Housing (DBH) report (Department of Building and Housing, 2008) found that with the current zoning regime the region has between 16 and 28 years' residential capacity although there is considerable variation across the region and between capacity for high density building in the urban centres compared with that for low density single family dwellings elsewhere. However, as the report notes, land banking is apparent, with investors holding land inside and outside the MUL for long term future rezoning and subsequent increases in land values. Zoned land does not necessarily lead to development, and there has been temporary land holding as developers take opportunities to buy land. It is also noted that 'a significant feature of the Auckland land development sector is the ownership of very large areas of land by a single or a few development companies and the release of this land in stages over a number of years' (Department of Building and Housing, 2008).

The evidence on the impact of land prices used a model by Steve Bourassa (Auckland Regional Council, 1999) which found that the price of zoned land increased for all categories 1986–1996 and that urban zoned land within the MUL was the most valuable while rural zoned land outside the boundary was the least. However, in addition to the boundary there are environment constraints (topography, regional parks, water catchment areas) and infrastructure constraints (the cost of mains sewerage compared to septic tanks). However, there were some positive external benefits from the MUL. Thus increased land prices are partly due to amenity values associated with peri-urban and rural areas outside the MUL that are internalised in property values within the boundary. Given the environmental (natural) constraints a price gap would be likely at the urban boundary regardless of whether an MUL was in place.

Grimes and Liang (2007) found a strong effect on land prices that impacted not just at the urban boundary but spread throughout land values

within the MUL because the MUL restricted development capacity overall. Maclennan (2009) argued that more research is needed to test whether these effects were real, lasting and a result of planning policies or other factors. He also argued that abolishing the MUL as proposed by Grimes and Liang (2007) might be better addressed by more efficient infrastructure provision, new towns/town extensions, and higher levels of sustainability (Maclennan, 2008a).

In terms of developer take-up, the ARC's 2007 report found significant infill development but little comprehensive redevelopment of town centres or around transport nodes and corridors. However, half the dwellings built since 2000 have been townhouses, terraces and apartments, rising to 70 per cent in Auckland city. Greenfield development is easier for developers, as brownfield sites may have fragmented ownership, there may be opposition from local communities to increased densities and there may be planning delays as urban design issues take longer to address (ARC, 2007).

Provision of housing and related infrastructure

Housing development in New Zealand is mostly delivered by the private sector. The Department of Building and Housing (2011) estimates that there is a growing shortfall in housing supply. At a regional level, the shortfall in the Auckland region is projected to be 90,575 dwellings in the 20 years to 2031.

Local authorities have the potential to affect housing supply, and especially the cost of new housing, through financial contributions (under the RMA) and development contributions policies (under the LGA). There is no direct 'value capture' from the uplift in the value of privately owned land following planning permission or re-zoning. Any value capture is indirect and so not part of the planning regime as such. It happens in three ways:

Land value taxation

New Zealand has a form of land value taxation via the local rates that councils take on an annual basis from all property owners. Different systems are in place across the country but the majority are linked to the land value of the site in its unimproved form. This acts as an incentive to owners to improve and maintain their property. The land is valued according to its development potential under its zoning or resources consents (planning permission). Rates are the major source of income for local councils in New Zealand so they are set quite high and will rise, sometimes quite sharply, when the land is rezoned (and the site is re-valued), whether or not development takes place.

Financial contributions

Financial contributions are meant to offset the environmental effects of a development. They are directly linked to resource consent applications – so if a development is a 'permitted use' (that is, it fits the zoning) – then no financial contributions can be asked for. Where financial contributions are required the requirements must be clearly established in the planning documents (the District Plan) that is, financial contributions must meet the stated purposes of the plan, and are to be used to offset specific and connected adverse effects of the development. The imposition of financial contributions can be challenged through the planning process, by objecting to or appealing the consent condition or through a declaration to the Environment Court.

Development contributions

Development contributions are monetary contributions and the most recent funding method provided to local authorities. Under the Local Government

Act 2002, the council makes charges as part of the approval of development projects. This includes for residential development such as new houses and apartments, non-residential development, subdivisions and on some changes of use. The money collected from contributions is used to pay for the cost of infrastructure that is needed to meet the additional demand created by growth, including open space land, community facilities and network infrastructure such as sewerage and transport. The development contributions methodology is strictly prescribed in the LGA which sets maximum levels for development contributions and provides for separate formulae for reserves and network/community infrastructure (DLA Phillips Fox, 2008). Development contributions can be charged against a much greater range of activities than simply applying for planning permission, for example, when applying for a Building Consent where no resources consent is needed.

Development contributions can be distinguished from financial contributions. There are differences in the processes for imposing them, the purposes to which they may be put and the circumstances in which they can be required. As a result, local authorities may utilise both regimes as alternative sources of funding. In particular, the same development could be levied for both types of contribution subject to the prohibition on 'double-dipping' (DLA Phillips Fox, 2008).

Since their enactment in 2002, there has been a high take-up by local authorities of development contributions as a tool for funding growth. It is observed that many local authorities have moved away from using financial contributions, and every territorial authority in New Zealand uses development contributions (DLA Phillips Fox, 2008).

While clearly developers would prefer to pay smaller contributions, such a policy move would pass the associated costs on to the rate payers which would be highly unpopular. Auckland Council in its Auckland Plan 2012 has stated that it is considering directly targeting value uplift as it brings greenfield sites from within the RUB into zoning for development. This follows a similar approach in Australia. It is likely that a change in the LGA 2002 will be needed to enable this to happen.

Auckland Council has also been making strategic land purchases itself, to assist the amalgamation for brownfield intensified redevelopment. It has been working with New Zealand's social housing provider, Housing NZ Corporation, on redeveloping and increasing the density of existing areas of social housing. It has also lined up its infrastructure and asset investment plans to support intensification of targeted sites adjacent to public transport nodes and town centres, thus making those areas more attractive to potential dwellings and house purchasers. This is part of the council's planning role, to align social and physical infrastructure with development opportunities, thus enabling desirable development to take place in accordance with the plan.

Conclusion

New Zealand has two main mechanisms for bringing land forward for housing. One is zoning greenfield land for development, and the other is providing incentives for development (such as increased densities) on infill and brownfield sites within areas constrained by the planning system, such as Auckland's Metropolitan Urban Limit. In addition councils themselves purchase land and participate actively in the land and housing markets. The MUL had little impact on house prices for many years but this was probably due to lack of demand. Now that Auckland is growing rapidly, housing shortages are predicted and house prices within the MUL have been rising.

New Zealand also has a form of land value taxation, seen by some as the most efficient way of taxing land and development values. It is a major source of income for local authorities.

Republic of Ireland

The dominant housing tenure in the Republic of Ireland is owner occupation, constituting 70.8 per cent of the housing stock in 2011 (Central Statistics Office, 2012). In 20011, the private rental sector comprised 18.8 per cent of the housing stock while the social rented sector made up 8.9 per cent. Starting in 1996/7, in response to the booming Irish economy (Celtic Tiger) and growing credit availability, the housing market began to take off and house prices became out of the reach of middle and low income households. Throughout the boom, the pattern of migration changed from net outward migration to net inward migration. The global financial crisis affected Ireland severely, and outward migration rose again; however the high birth rate has compensated for this (2.6 children per household). The rise in house prices triggered a delayed response in new housebuilding, which came to an abrupt halt with the crisis, leaving empty and half-completed dwellings, often in rural areas (Gkartzios and Scott, 2009).

Planning system

The Irish planning system is hierarchical (Oxley *et al*., 2009). The central government, via the Department of the Environment, Heritage and Local Government (DoEHLG), sets legal and functional constraints for local authorities and plays a supervisory role. A unique feature (within Europe) is the independent third party planning appeals system operated by *An Bord Pleanála* (the Planning Appeals Board; Oxley *et al*., 2009). In 2002, the central government published a National Spatial Strategy (NSS), setting out a 20-year planning framework from 2002 to 2012. The NSS provided a national framework for dealing with spatial issues on an inter-regional basis and contributed to the development of a planning framework operating at national, regional and local scales, regulated by the Planning and Development Act of 2000. The NSS is implemented by regional and local authorities (Gkartzios and Scott, 2009).

Regional authorities prepare the Regional Planning Guidelines (RPG) that must follow the provisions of central government's NSS. Under the Planning and Development Act of 2000 (Section 27.1), local authorities' development plans are obliged to 'have regard to' the guidelines in place for the relevant region. However, this is not the same as legally binding, and Gkartzios and Scott (2009) found that local authorities take no notice of the RPG especially when developing strategies for residential or industrial development. This questions the effectiveness of the planning system to achieve desired planning goals at the local level. In addition, the regional authorities that are responsible for preparing the RPG have little statutory power, limited human resources and lack widespread public recognition.

Since 2000, local authority Local Area Plans have been a statutory requirement and set out detailed policies, which must be consistent with the Development Plan, for specific localities. There is a requirement for public participation in these plans which much be renewed every six years (Scott *et al*., 2012). Local authorities take account of housing demand and plan for appropriate provision that is line with national policy and regional guidance. Most local authorities now have separate development departments, which

operate alongside and often in conflict with the planning department (Oxley *et al*., 2009).

Dublin

Dublin is the largest city in the Republic of Ireland and the seat of national government, with a population of over one million. Local authorities have adopted an entrepreneurial approach to planning in Dublin since the mid-1980s, especially as it relates to urban regeneration in the inner city, which has been designed to facilitate development (McGuirk and MacLaran, 2001; Oxley *et al*., 2009). Measures have included the introduction of tax incentives to promote development and the establishment of special-purpose planning agencies to speed up planning decisions. Local development plans have become more flexible and pro-development. Three aspects of the formal planning system have also been identified as supportive of development with the introduction of fast-track planning decision-making:

1. The Dublin Docklands Development Authority Act, 1997 allows for simplified planning processes for delivery of commercial (mainly), housing and other development in the designated Dublin Docklands areas;
2. Strategic Development Zones (SDZs) were introduced in the Planning and Development Act (2000), whereby once a master plan is approved for a development scheme, no third party appeals can be made by the public in relation to individual development proposals within the approved scheme (this has been primarily applied to large housing developments); and
3. The Strategic Infrastructure Act (2007), an attempt to secure speedier delivery of key infrastructure through providing a one step consent procedure, rather than the conventional development control process (Oxley *et al*., 2009; Scott *et al*., 2012).

Provision of housing and related infrastructure

There are two main mechanisms whereby new housing development is encouraged in Ireland.

Tax incentives for residential development

In the mid-1980s, incentives for residential development in the form of capital allowances were introduced in designated renewal areas to facilitate regeneration.

Capital allowances were applied to corporation and income tax benefited companies, partnerships, individuals and other taxable entities. An owner-occupier was able to offset all allowances in year one – namely, free depreciation up to 50 per cent. In contrast, an investor could claim an initial allowance of 25 per cent in year one and an annual allowance thereafter until the maximum relief was exhausted (McGreal *et al*., 2002). Rate relief was available for a period of 10 years for qualifying premises in urban renewal areas. The rate relief was payable in relation to enlargement or improvement of existing commercial buildings and also to new commercial buildings. All these tax benefits were initially applied to the inner areas of the five cities, but in 1995 were extended to cover 30 large towns and 70 coastal resorts and expanded again in 1998 to include 100 small towns and three rural counties (Norris and Shiels, 2007).

Although there have been some alterations, these measures and Section 23 relief on residential property (a tax relief for landlords of rented residential property) formed the basis of the package of taxation breaks that prevailed until 2006. However, by the end of the 1990s with economic growth and rising property prices, there was a change to the tax breaks

policy which resulted in the remaining tax incentives (capital allowances, Section 23 relief) being applied on a more selective basis at the individual project level in cities and towns rather than being available across a wider designated area (McGreal *et al*., 2002). Although, also in 1999, these incentives were applied to a large rural region in the north west (Gkartzios and Norris, 2011). These measures were abolished in 2006 amid concerns about their role in enabling tax avoidance and oversupply of dwellings and also about deadweight loss

Increased residential density

The DoEHLG published new *Residential Density Guidelines for Planning Authorities*, which recommended the doubling of densities in suburban areas. Norris and Shiels (2007) found that these guidelines had an impact on the property types of new dwellings. The proportion of new dwellings in Dublin which are terraced houses or apartments rose by 50 per cent between 1992 and 2002, although land price inflation may also have been an influential factor. This increase in densities contributed to the huge expansion in housing output in Dublin since 2000.

Other planning legislation is designed to meet the funding gap for both affordable housing supply and infrastructure requirements. These include planning gain (similar to S106 in the UK) for affordable housing and development contributions to meet infrastructure costs.

Planning gain legislation

The concerns about the lack of social housing output and increasing problems with the affordability of home purchase for low and moderate income households led to the Planning and Development Act, 2000 (Norris, 2006). Part V of the 2000 Planning and Development Act required local authorities to amend their development plans to incorporate housing strategies which set out how future housing demand within their operational areas should be met. The need for social housing to rent and for 'affordable housing' which, in the Irish context, refers specifically to housing for sale at below market value to low to moderate income households, must be taken into account in the formulation of these strategies. To satisfy this social and affordable housing need, local authorities were required to identify up to 20 per cent of land zoned for residential development locally as social or affordable housing. Property developers must transfer the necessary proportion of dwellings, land or sites to local authorities as a condition of planning permission. In return, they were compensated at the level of the existing use value (in the case of land), plus development costs (in the case of sites) plus reasonable profit (in the case of houses; Norris, 2006).

Because of the opposition of developers, the Planning and Development Act 2000 was amended in 2002. The Planning and Development (Amendment) Act, 2002 provided developers with alternative options for meeting their Part V commitments, allowing them to provide cash compensation and/or dwellings, land or housing sites in an alternative location. This legislation also abolished the stipulation that planning permissions which predated the 2000 Act would lapse if not taken up within two years of being granted (Norris, 2006).

Overall, Norris and Shiels (2007) found that Part V has had limited impact on total housing output. By the end of 2004, only 800 social or affordable dwellings had been delivered through this mechanism.

Development contributions

Since 2002, development contributions have been introduced as a part of planning permission to fund the infrastructure that is necessary for housing construction and for community benefits such as recreational areas and parks. The details of the charging are determined by the local authority but are typically at a given amount per dwelling or per square metre of usable space. The rates charged can vary with location and within the local authority areas, and can be charged more on greenfield than brownfield sites (Oxley *et al*., 2009). During the housing boom local authorities, particularly in high growth regions, became very heavily dependent on development levies as a source of revenue. As a result the collapse in this income following the sharp decline in housing output has created significant funding problems in the local government sector.

Location of new dwellings

Between 1993 and 2007 the Greater Dublin Area grew at an unprecedented rate. This created increasing distrust of local political institutions and 'a perceived failure of local planners and politicians in managing urban growth and in addressing quality of life concerns of local residents.' (Scott *et al*., 2012, p. 152). Much of the growth resulted in rapid and extensive development on the edge of the city in addition to increased densities in existing residential areas. Small flats proliferated, and when recession hit, house prices fell rapidly, particularly in the edge of the city and unfinished or half finished dwellings were left as developers faced bankruptcy.

At the same time, over one in three new homes in the Republic built during the housing boom were detached houses dispersed across rural areas, commonly termed 'one-off housing' (Gkartzios and Scott, 2009). This emerged as a planning issue and applications for single housing in rural areas became a major concern for most planning authorities in those areas. The planning system in Ireland has been described as one of the more lax regimes in Europe (Duffy, 2000). Despite an emerging spatial planning system, with an emphasis on integration between the delivery of housing and the provision of adequate infrastructure, in practice planning goals are delivered through much more traditional land use regulation focusing on individual planning applications assessed in isolation from wider strategic issues (Gkartzios and Scott, 2009).

South Korea

Owner-occupation is the main form of housing tenure in South Korea, although the proportion of home ownership fell from 63.6 per cent in 1975 to 55.6 per cent in 2005 (Ha, 2010). Home ownership in the latest census 2010 was 61.3 per cent. One feature of South Korean housing policy is its relatively high investment in housing which has consistently accounted for around 5.3 per cent of GDP in recent years compared with three or four per cent in most other OECD countries. There were some years in which the figure was seven per cent or higher.

Until the late 1980s, housing was given a low priority in the allocation of resources as housing was considered less productive than the export manufacturing sector.

Planning system

The Seoul Capital Region (greater Seoul metropolitan area) has become the world's third largest metropolitan area, housing 22.5 million people,

according to the 2010 census. The conurbation is projected to grow further if the trend of migration out of rural areas and smaller towns continues. The pace of migration has been decelerating and population in the region is stabilising in recent years. Population density is among the highest in the world at 10,400 people per sq kilometre (Statistics Korea, 2011). Historically, South Korea has been a centrally-planned economy. Its high growth rate and rate of urbanisation has taken place in the context of a strong planning system. This rapid growth initially took the form of urban sprawl yet at the same time the region had been experiencing problems of inner city growth (Kim K.-J., 2001). Inner city redevelopment, where existing dwellings are replaced at higher densities, has accounted for almost half of new housing starts in recent years and this has created problems in terms of infrastructure provision, transportation, affordable housing, community facilities and urban design. Growth management became a major challenge in this context.

The Ministry of Land, Transport and Maritime Affairs (MLTM) drafts an annual plan for housing supply. The plan provides a supply target broken down into individual programmes such as public rental housing, apartments for owner occupation supplied by the Korean Land and Housing Corporation (LH) and so on, and also broken down by region. In addition the plan sets out the land supply for residential development to meet the housing supply target.

Special mechanisms for growth control

The South Korean urban sector has been run like a centrally planned economy (Kim and Kim, 2000). There are more than 100 regulations regarding land use, and they can be grouped into three categories: regulations on the conversion of non-urban land into urban use (such as the National Land Planning Management Act), those on the use of land already in urban use (such as the containment of growth of the Seoul Capital Region), and those retaining land in non-urban uses (such as green belts). In addition, there have been price controls on new apartments to keep housing affordable in the face of rapid price increases and direct intervention in the land market by government agencies in an attempt to curb potential speculation.

The primary objective of government policy has been to expand the housing stock. Land required for housing construction was mainly provided by the public sector. This approach proved effective in achieving the policy goal, but such a supply-driven approach created distortions in terms of prices. One current controversy concerns whether too much supply is forthcoming, as migration from rural areas has slowed down and demand is therefore decreasing.

The National Land Planning and Management Act (NLPMA)

The government originally controlled the amount of developable land through the National Land Use Management Act (NLMA) and the Urban Planning Act (UPA). The NLMA was revised by the government in 1994 to simplify the classification of national land use. As a result, the share of developable land jumped from 15.6 per cent to 41.7 per cent of the nation's total land area. In practical terms, however, actual use of 'developable' land is regulated by the UPA. Under the UPA, 76 per cent of the 'developable land' was zoned as agricultural land or green belt, and hence was not developable in practice. Therefore the share of land in urban use as a percentage of the nation's entire land supply increased from 4.3 per cent to only 4.8 per cent, and the residential and commercial land area increased from 1.9 per cent to 2.1 per cent between 1989 and 1995 (Kim and Kim, 2000). The National

Land Use Management Act and the Urban Planning Act were later integrated into the National Land Planning and Management Act.

Green belts

South Korea has the second oldest green belt in the world, second only to those in the United Kingdom. Seoul's green belt system was introduced in 1971 as an important component of the 1972–81 National Comprehensive Physical Plan during the authoritarian government of President Park Chung Hee. The boundaries were based on political decisions and not as outcomes of land use surveys (Bae, 1998).

Seoul's green belt is very large, consisting of a band averaging about 10 km wide, beginning about 15 km from Seoul's central business district. After being extended four times, by 1976 Seoul's green belt took up approximately 1,566.8 km^2 of land, which amounts to 13.3 per cent of the entire Seoul metropolitan area. However, the population that lives within the green belt is small, accounting for only 1.66 per cent of the Seoul Metropolitan Area's population (Bae and Jun, 2003). Because almost 60 per cent of Seoul's green belt consists of mountains and forests that are heavily used for recreation (Bae and Jun, 2003), the green belt policy has enjoyed high levels of support from the general public (Kim and Kim, 2000).

The legislation and accompanying decrees prevent land-use conversions from agricultural use, land sub-divisions and construction activities other than rebuilding or altering existing structures inside the green belt without prior approval from the relevant government offices. The types and the extent of acceptable land uses are specified in the decrees. Implementing the regulations and monitoring the land use and development activities inside green belts is a responsibility of local governments. This policy has been contentious amongst landowners as approximately 80 per cent of the land within the green belts is privately owned (Bengston and Youn, 2006).

The green belt policy remained essentially unchanged for almost 30 years. Public discussion of the problems associated with the green belt was prohibited during the Park regime, which lasted until 1979. The democratisation and presidential election of 1997 led to a review and reform of the green belt policy. The reform momentum was primarily initiated as a response to a political problem created by the neglect of the property rights of the "natives" (residents). The outcome was the abolition of greenbelts in seven medium-sized cities and much more modest releases of land in the seven largest cities, including Seoul and Pusan (Bae and Jun, 2003).

Bengston and Youn (2006) find that Seoul's green belt has generated both significant social costs and benefits. It has been successful at protecting important agricultural land, providing badly needed recreational resources in a mega city with few parks, protecting the beauty and natural heritage of the ancient capital of Korea, and maintaining vital ecosystem services. However, it has been accompanied by high prices of urban land and housing.

Green belts around provincial cities were lifted in 1999. Also the government has been releasing land from the green belt to secure land for both rental and owner-occupied housing units built by the public sector since 2000.

Containment of growth of the National Capital Region

Since 1964, various measures have been implemented to limit the growth of the capital city and later the Seoul Capital Region. Differential tax treatments were provided to discourage location in the Capital Region or to encourage dispersal from the Region. Some government offices were moved out of Seoul.

The Capital Region Management Law, legislated in 1982, formed the basis of the de-concentration policy. The First Capital Region Management Plan prepared in 1984 divided the Capital Region into five zones, later three, and applied different degrees of growth control to each zone. For example, construction of buildings with floor space exceeding 25,000 m^2 or with more than 21 storeys, colleges and universities, and factories employing more than ten workers was banned within Seoul.

During the 1990s, Seoul's population decreased in absolute numbers partly because of out-migration to the five new towns built beyond the outer edge of Seoul's green belts within the Kyunggi Province. Population in the Seoul Capital Region has continued to increase over the past four decades but the pace has been decelerating since the 1980s (Kim, K.-H., 2001).

By the early 1990s, the government decided that growth control in the Capital Region was too rigid and was eroding the competitiveness of Korean industries. The Second Capital Region Management Plan for 1997–2011 adopted a more flexible approach. The five sub-regions were reclassified into three, and economic incentives and disincentives were introduced to supplement direct regulations. High-tech industries were accommodated in the Seoul Capital Region to better cope with global competition, and there was heavy investment in the transport infrastructure to improve overall efficiency and to strengthen the Region's potential to serve as an international centre.

But the containment of growth of the National Capital Region was reinstated in 2001 and controlling the growth of the Capital Region remained a priority policy in the Ministry and the government as a whole (Kim and Kim, 2002).

Impact of green belts

The most serious side effect of preserving green belts was the high prices of urban land and housing. By prohibiting the conversion of non-urban land inside green belts into urban use, the government created an artificial scarcity of developable land, thereby raising the price of land. In response to rising housing prices, the government decided to increase the housing stock. The government campaign to build two million dwellings for the period of 1988–92 resulted in an increase in the average annual production of houses from 200,000–250,000 units to 500,000–600,000 in each year until the onset of the Asian financial crisis in late 1997. Five new towns were built outside the outer edge of the Seoul's green belts to accommodate a planned population of about 1.2 million (Kim, K.-H., 2001). As a result, the cumulative supply of new housing between 1988 and 1997 amounted to 55 per cent of the total stock at the end of 1997 (Kim and Kim, 2002).

Mechanisms to increase land supply

Land readjustment

Land readjustment in the context of South Korea appears to refer to the direct intervention in the land market by government agencies who purchase land, service it, divide it into parcels and sell it to developers at prices that, taking account of construction costs, will be profitable to the developer while keeping house prices affordable. The land readjustment project was first implemented in Seoul in 1936, and four projects covering 1,023 ha were completed before 1945. South Korea reintroduced land readjustment in 1960 in order to reconstruct the cities destroyed by Korean Civil War and also to meet the needs of rapid urbanisation in metropolitan regions. In 1966, South Korea enacted the Land Readjustment Act, providing the legal basis for land readjustment projects (Hayashi, 2000).

Intensification

Perhaps the main instrument for delivering the high output of new housing within the Seoul City Region during the 1990s and 2000s has been the demolition of existing homes in order to build new apartment blocks at high densities. Such intensification has enabled the inner areas of the conurbation to provide better quality homes than those demolished, which at least to begin with was simple because dwellings built in the immediate post war period were of very poor quality. Such intensification is continuing today, with vast areas being cleared and redeveloped. Land readjustment originally created the possibility of redevelopment and the high output of housing was achieved through increased density of development (Kim K.-J., 2001).

Conclusions

The government has been paying greater attention to housing welfare over the past decade or so. The housing corporation LH has been mobilised to supply long-term rental housing in large numbers. The previous government set a target of providing one million public rental units over a ten year period. The target was reduced by the current administration but a sizeable number of new rental units are being built. The supply of new housing is subject to price controls on new apartments as well as controls on the size distribution of new units.

Much of the land for new housing construction is provided through 'public sector land development projects' involving LH and development corporations affiliated to city and provincial governments. Land development by private sector developers is limited to small projects.

Most of the new housing supply in the city of Seoul comes from re-developing existing low density residential areas at higher densities. In addition the government has released small quantities of land for housing from the Seoul green belt in recent years. Land readjustment used to be a major way of supplying land for housing until the 1970s, but its role is now minimal.

Switzerland

Unlike many European countries, Switzerland has a very large private rented sector that remains the largest tenure in the country. Home ownership rates however have increased from 31.3 per cent in 1990 to 34.6 per cent in 2000 (Census data) and 39 per cent in 2008 (Swiss Federal Office of Housing, estimate). In 2009, 57 per cent of the housing stock in Switzerland was private rental and cooperative dwellings (Andrews *et al*., 2011a, data from OECD questionnaire survey). Many Swiss households own a 'second home' in the mountains. While these are not main residences, including them in the statistics would produce a rather different tenure picture. There is a very small and diverse social housing sector, whose owners include housing cooperatives, public entities and public limited companies.

Around three quarters of the population live in urban areas, especially one of the three metropolitan areas of Zurich, Geneva/Lausanne and Basle. Switzerland is about 17 per cent of the UK's land area and it has a population of eight million (Evans and Hartwich, 2005). Population growth has been faster in Switzerland than in the UK at 49 per cent compared with 28 per cent in 2005 and an average of 45 per cent per annum over the period 1970–2005 compared to 28 per cent per annum in the UK.

House prices are high but not relative to incomes. However, the volatility of house prices has been almost double that of Germany (Evans and

Hartwich, 2005) which could be explained by the very low proportion of vacant dwellings, so that changes in demand translate directly into house price changes. The responsiveness of supply to house price changes is the lowest among OECD countries at about 0.15 (Andrews *et al.*, 2011b). Despite this, the Swiss managed to produce 6.41 completions per 1000 inhabitants in 2003, compared to only 3.14 per thousand in the UK in the same year (Evans and Hartwich, 2005).

Planning system

Switzerland is organised on three political levels, the Confederation, 26 *Cantons*[9] and some 2500 *communes* (Evans and Hartwich, 2005), with a political system typified by a high degree of local autonomy The Swiss Confederation only takes responsibility for framework legislation on spatial planning, and draws up some special plans related to national requirements. The *Cantons* produce the cantonal structural plan and delegate material executive issues, such as the land use plans that are binding on landowners, to the *commune*.

The cantonal structural plan governs how different planning related activities by the Confederation, *Cantons* and municipalities are coordinated within a given *Canton*, in order to harmonise the activities of different authorities. These structure plans are normally updated and revised at least every 10 years (Pütz *et al.*, 2011).

In large *Cantons*, the cantonal structural plan is implemented by means of Regional Structural Plans at regional level. Spatial planning activities concerning more than one municipality are delegated to regional public planning associations. For example, in the *Cantons* of Aargau and Thurgau the planning associations draw up basic planning studies and provide the communes with spatial planning support (Muggli, not dated).

As Swiss *Cantons* have a highly developed municipal federalism, *communes* are the most important decision maker for spatial development. They draw up overall concepts and the land use plan which specifies the boundaries of specific land use categories, as well as the type, size and extent of buildings and structures in construction zones.

Special mechanisms for growth control

The area suitable for settlement is constrained by large uninhabitable Alpine areas. The characteristic feature of the Swiss urban structure is the large number of small and medium-sized towns: by far the largest Swiss town – Zürich – has only 390,000 inhabitants. The population density is 196 persons/km^2. However, the agglomeration of Zurich encompasses 1.66 million habitants. In the Swiss plateau area (the area where three-quarters of people live) it is estimated that 22 per cent of all possible land for construction is already used for housing or traffic (Mann, 2009). The stated objective of the Swiss federal government is therefore to stabilise land use patterns. In 2002, it was proposed to keep the current settlement area at about 400 m^2 per head. Recent statistics completed for Western Switzerland indicate that the number has grown from 400 m^2/head in the 1990s to the current 409 m^2/head (Mann, 2009).

Designated Building Areas (DBAs)

Designated Building Areas (DBAs) are an important urban planning tool in Switzerland. Since the inception of the Federal Law on Land-use Planning in 1980, construction outside DBAs has been restricted by precise regulations and only agricultural and buildings tied to certain locations are permitted (Hauri *et al.*, 2006). However, it is estimated that approximately 30 per cent

of buildings are located outside DBAs of which 10 per cent are residential buildings. There is also an increasing trend for residential buildings to be located outside DBAs: an increase by 3.7 per cent from 1990 to 2000. In the same decade, the population living outside DBAs fell by more than six per cent, while the total population of Switzerland increased by six per cent, so population density is increasing.

The federal parliament has been discussing proposals to revise regulations governing construction outside DBAs. The current Land-use Planning Act and its detailed and restrictive regulations are viewed as over centralised and often inadequate to the diversity of rural forms of settlement and they are not implemented properly (Hauri *et al*., 2006). However, the main focus of amendments to regulations concern the easing of limitations on new buildings outside DBAs – largely in response to demands by agriculture. At present the main focus of a new regulation is on a strict limitation of urban sprawl.

Mechanisms to increase land supply

Land hoarding, the withdrawal of a buildable plot from the land market, is perceived as a major problem in Switzerland (Weber, 2010). Because owners hoard their land, municipalities facing growth do not always have the necessary land in the right place. This leads to urban sprawl and localised land supply problems.

One mechanism to try and avoid land hoarding has been the development of Land Improvement (LI) Syndicates of land owners. For example, the *Canton* of Vaud has created a voluntary Land Improvement Syndicate (LI syndicate), a land management tool which aims to establish coordination between spatial planning and land management issues in order to avoid land hoarding (Weber, 2010).

The LI syndicate is a public corporation supervised by local authorities. All landowners affected by spatial and land development projects are members and have the right to vote within the decision process. Decisions are taken on a majority basis, and each owner has one vote. Together, landowners seek to reorganise the land property to allow valuable development of the land, to equip their properties accordingly and to update the building rights according to the chosen development project (Weber, 2010).

The first step in a LI syndicate is studying the land and property management, distribution of costs and changes between the old use and the proposed new land use (Weber, 2010). The land improvement file and the zoning plan are subject to a public inquiry. Once the zoning plan and the transfer of property rights comes into force, the syndicate focuses on servicing the land and providing collective spaces before the cadastre and land registry are updated. On completion, costs are distributed between all members and the LI syndicate is dissolved.

In case study examples, Weber (2010) finds that the LI syndicate allows local authorities to integrate all stakeholders into the process of development. The LI syndicate also manages the different parts of the development process simultaneously: zoning (building rights), readjustment (property rights), and collective infrastructure and spaces. In terms of zoning, the LI syndicate enables planning of an urban development project by integrating the wishes of the owners directly at the start of the process and landowners become shareholders of the project. This means that the value that landowners have at the start is proportionally redistributed at the end of the project because land values increase during the whole process (Weber, 2010).

Pro-growth attitudes: case study examples

Evans and Hartwich (2005) argue strongly that the Swiss institutional and planning systems together act to encourage growth including new housing development. They say that planning is not seen as a necessary evil to control or prevent development, but as a tool to develop a region strategically for the benefit of its current and future inhabitants. They note that the most important plans are at the lowest level, sometimes for a single piece of land, and are legally binding on the municipality and also on the landowner. If a proposed building fits the plan, a permit to build must be granted, so long as there are no legal rules preventing the building.

They argue that the factors that work in favour of new development include the so-called militia principle (Milizprinzip). This means that most politicians at local and cantonal level perform their political role part-time and also have a job. This makes it possible for local governments to include professionals working in the building and construction sector. As Evans and Hartwich note, this sounds as if the building lobby has 'captured' the planning process, yet in practice it ensures that building practitioners have some representation in the planning process from the start, along with other groups. However, there are drawbacks: the voluntary politicians often have little knowledge about planning, in particular in small municipalities. Hence, they may not be up to their planning tasks.

Submission rules for public projects often give an advantage to local developers, so it is in their interests to have close ties with local decision makers. Evans and Hartwich (2005) say that this is a 'symbiotic relationship of developers and local and regional politicians which works in favour of development.' (p. 33). This also implies that municipalities invest a lot of money into infrastructure development and are very sensitive to demands to increase building activities.

Taxes for both individuals and businesses are among the lowest in Europe and the OECD, with a fiscal share of around 31 per cent of GDP (the OECD average in 2005 was 36.6 per cent). Within this the share of federal income tax is very low. At the same time, the cantons and municipalities both raise taxes – more than two thirds of the total sum of taxes and social security contributions. There is a wide range of different tax systems with different tax rates and tax reliefs and there is fiscal competition between and within cantons.

Evans and Hartwich (2005) present three case study examples of the operation of the planning system in Switzerland, The first is Zurich, which is a city with 390,000 inhabitants, but also a canton of 1.247 million people spread over 12 districts with 172 municipalities. The wider Zurich agglomeration spreads even further, into the neighbouring cantons and the Greater Zurich area has a population of 1.65 million. It is the dominant economic centre of the country. An important issue, therefore, is how planning decisions made at the lowest administrative level can be reconciled across such a large urban area.

The city of Zurich has been losing population until early 2000, but demand for living space has increased as incomes have risen despite a decline in household size. The city's strategy is to increase densities. 'We are cooperating with developers, homeowners and the council's land bank to identify areas in which densification policies are possible and reasonable. In some areas, we are explicitly supporting the replacement of existing buildings which can provide twice or three times the original floor space.' (p. 37). However, even this is not thought to be sufficient, but further land release for housing is only possible in the Greater Zurich agglomeration. While some oppose this, warning of the 'destruction of landscape by settlement',

there is a greater consensus over the fact that the option of developing outside existing areas was taking the pressure off rents and house prices. These would have been much higher had the city been unable to grow in the hinterland, but it was at a cost of development of green fields (page 38).

The second example is Zug, both a city and the capital of the Zug canton. It has the highest per-capita income and the lowest income tax rate in Switzerland. This means that the canton has to pay large contributions into a federal compensation scheme for poorer cantons. Zug is a small canton with only eleven municipalities, which is seen as an advantage because it is easier to get cooperation and agreement on planning issues.

The canton of Zug also faces increasing demand for space, both because its population is growing and also because of the demand for more space per dwelling. To meet this demand, the city of Zug, for example, has developed a further 40 hectares over the last 20 years even though the city's population has remained static. The planners have not embraced densification, partly because the dwelling stock is relatively new. Re-zoning industrial and commercial zones does not make sense because their locations are not desirable for housing. Instead the city is extending existing settlements by releasing more residential land. Land purchase is not a problem because the law only allows farmers to buy agricultural land, which limits land speculation. So farmers whose land is rezoned for housing are likely to support development.

The final example presented by Evans and Hartwich (2005) is the canton of Schwyz, a fifty minute train ride from Zurich. The city of Schwyz is in the mountains but like Zug it is a part of the metropolitan region of Zurich. The canton was always relatively poor in the past, but it began to absorb some of Zurich's growth and this population increase is forecast to continue by about 25 per cent over the next decade (p. 41). The area became increasingly attractive to wealthier residents because of its low taxes, and the more that affluent people arrived, the more the communes and municipalities reduced their taxes, creating a tax haven for people working in Zurich. This meant that the local residents experienced the benefits of new housing development first hand, as their taxes were successively reduced.

Conclusion

Switzerland, unlike many other European countries, does not face a shortage of land supply for housing. On the contrary, each of the 2,600 municipalities has the right to set out zones for house building in its area. The incentive to increase the size of these zones is strong as new settlements promise increased tax revenues. This type of incentive could have potential in the UK more effectively than the New Homes Bonus.

United States of America

Planning system

There is no comprehensive state or regional planning in the USA. Federal intervention in land use decisions is generally confined to indirect means such as environmental regulation, the management of nationally owned lands, investment in transportation infrastructure, the provision of financial assistance and housing subsidies and the dissemination of information and technical assistance (Schmidt and Buehler, 2007).

Land use regulation in the USA therefore operates at the local level. The Constitution says little about land use, and state governments have historically delegated decisions about land use to local governments – cities,

villages, townships and counties. The most common form of local land use regulation is zoning which has traditionally been used to separate land uses. It has evolved over time from rigid single-use specifications, to setting a limit or maximum that the developer or owner cannot exceed. This gives greater flexibility.

Because of the lack of national planning, the USA has produced a wide range of different approaches. Pendall *et al.*'s (2006) survey of local governments in the 50 largest metropolitan areas categorise land regulation approaches from 'traditional' to 'reform' according to the degree to which they have comprehensive planning, exclusionary zoning, containment/growth management, or no zoning at all. Also, the legal, institutional and ideological framework in the USA encourages individual property ownership with a minimum of government intervention, which limits the role of local planning authorities.

The concept of 'home rule' is an important factor shaping American planning. It expresses the principle that local government holds the power to take decisions about taxation and spending. This reinforces the specificity of each locality. It also creates opposition to shared services. Instead of 'fiscal federalism' where spending and taxation occur at the most effective level of government, home rule implies that to meet the costs of infrastructure and services, municipalities can either decide to minimise population expansion by favouring low density, single family housing, or raise taxes and impose fees. In spatial planning terms, this can be done by exclusionary zoning and minimum lot sizes together with fees and taxes. Planning in the US is justified and supported when it serves to correct market failures but is considered unjustified when interfering with the private market. As a result, planning intervention often relies on economic efficiency arguments, rather than appeals to 'the public interest' or 'social justice' (Schmidt and Buehler, 2007).

Special mechanisms for growth control

Urban containment policy

The goals of urban containment policy usually include the following (Pendall *et al.*, 2002):

1. preservation of undeveloped land, including agriculture and land for resource extraction, whose economic value will not be able to compete with urban development,
2. the cost-efficient provision and use of urban infrastructure,
3. reinvestment in existing urban areas that have become run down, and
4. the creation of higher-density land-use patterns that encourage a mix of uses and provision of public transport systems, leading to a more efficient utilisation of land in urban areas.

Urban containment policies use at least three types of tools to shape metropolitan growth:

A **greenbelt** usually refers to a band drawn fairly tightly around a city or urban region that planners intend to be permanent or at least very difficult to change. In most cases, greenbelts are created by public or non-profit purchase of open space lands or of development rights on farmland.

An **urban growth boundary** (UGB) is a line between urban and rural land rather than a physical area. In the US, UGBs – unlike greenbelts – are often deliberately designated to accommodate growth for a specified period of time (20 to 30 years), revisited periodically, and then changed as necessary. A wide range of techniques are used to implement UGBs. In general, UGBs are

best known for using regulatory techniques such as zoning to prevent urban development outside the growth boundary.

An **urban service boundary** (USB) refers to the edges of an **urban service area** (USA), and is typically more flexible than a UGB. It comprises a line beyond which a city's infrastructure – typically water supply and sewerage – will not extend. In many metropolitan areas, USAs support a 'tiering' system – that is, a system that directs public infrastructure into new areas in a particular sequence – in order to eliminate 'leapfrog' development, encourage orderly urban expansion and reduce the cost of public infrastructure. Urban services are also often tied to **adequate public facilities ordinances** (APFOs) – tools adopted by municipalities and counties to restrict or prohibit new urban growth unless that growth is served by roads, public water, public sewers and other urban infrastructure.

Green belts

Only a few communities in the USA have conscious green belt policies – the most prominent is Boulder, Colorado (Pendall *et al*., 2002).

Urban Growth Boundaries (UGBs)

UGBs have been increasingly promoted as a useful and effective tool in constraining urban growth. The growing support for UGBs reflects the high profile of the UGB system in Oregon and especially in the Portland metropolitan area. However, there has also been some criticism of the Portland scheme which not been so effective at maintaining affordable housing prices as when it was first introduced. UGBs do not appear to be as widely used in the USA as many people perceive (Pendall *et al*., 2002).

Urban Service Area (USA) and Adequate Public Facility Ordinances (APFOs)

USAs resemble UGBs in the sense that they create geographical limits on urban growth (at least urban growth that requires the extension of public water and sewer systems). However, they tend to be more flexible and easier to move as a city grows because they tend to be concerned with the geographical sequencing of growth rather simply constraining it.

An APFO is a land use regulation designed to ensure that necessary public facilities and services to support new development are available and adequate, based on adopted level of service (LOS) standards at the time that the impacts of new development occur. It is one component of land use controls based on 'Smart Growth', a concept designed to address planning capacity and quality, urban form, and infrastructure with a supportive decision-making process.

An APFO is generally implemented by a local government that is also a land use regulatory authority, whether or not that unit of government is the provider of the relevant facilities and services. Implementation is through the land use regulatory process (that is, master plan amendments, subdivision approval, re-zonings, development plans and/or building permits) and some kind of capital improvements programme for public facilities.

In 1970, Ramapo, a suburb of New York City, passed the first APFO. Instead of allowing developers to build homes and commercial areas and then providing the sewer, water and other urban services needed by those areas, Ramapo decided that it would approve new developments only after the capital improvements needed for the development were fully financed. Since then, many other local governments have experimented with them. The concept of adequate public facilities for new growth became the centrepiece of Florida's state-wide growth management system in 1985, and

Washington's 1990 growth management statute adopted the APFO concept for developing areas within urban growth areas (White and Paster, 2003).

Pendall *et al*. (2002) found that the specific infrastructure issues addressed by APFOs divided consistently into two groups around the country. Transportation, water and sewer, and parks were frequently the subjects of APFOs, while schools and police/fire were less common. In general, there are more APFOs in the South and West than in other parts of the country. This is especially true of parks and transportation APFOs. One exception is the Washington, DC area, where there are several school APFOs.

Typically, urban containment policies in the US are adopted at the local and county government level and rarely coordinated at the level of the metropolitan area. In a few cases – notably Oregon, Washington and Tennessee – metropolitan-level urban containment policies are required by state law.

A survey of urban containment policies at the local level by Pendall *et al*. (2002) found that:

- Over 17 per cent of jurisdictions surveyed in the largest 25 metropolitan areas were found to have urban boundaries in 1994 and 30 per cent were found to have APFOs. Although no comprehensive survey has been done since then, there is evidence that conscious urban containment policies have proliferated in recent years, particularly in the Mid-Atlantic region and the West.
- 44 per cent of counties used urban boundaries compared to only 15 per cent of cities. However, in many cases, it appears that the tools counties actually use are not tightly drawn UGBs, but rather, USAs that are more flexible and more focused on directing urban growth rather than containing it.
- At least one urban boundary existed in 23 of the 24 states surveyed.
- The adoption of local urban boundaries has increased steadily over time, and boundaries have been adopted much more frequently since 1980 and especially since 1990.
- In some cases, state laws encouraged UGBs.

Overall, urban containment policies aim to direct growth and perhaps change its nature, rather than restrict the amount of growth. Theoretically, the price of land inside a boundary should rise relative to prices outside the boundary, and this should motivate urban developers to develop at higher densities. As a result, the whole area inside the boundary ought to move toward more 'efficient' land utilisation (Pendall *et al*., 2002). APFOs also appear to increase densities, largely because it is cheaper to provide new development with public services at higher densities. However, APFOs can have unintended adverse consequences. For example, In Florida, strict local enforcement of state-mandated APFO requirements relating to levels of service and capacity of roads has had the effect of pushing development away from moderate-density built-up areas that have roads with low levels of service and into more peripheral and rural areas with higher-level-of-service roads that have greater capacity – thereby creating urban sprawl (Anthony, 2004).

Growth management (smart growth) legislation

'Growth management' refers to the integrated use of the planning, regulatory and fiscal authority of state and local governments to influence the pattern of growth and development in order to meet projected needs (Nelson *et al*., 2002). Included in this definition are such tools as

comprehensive planning, zoning, subdivision regulations, property taxes and development fees, infrastructure investments, and other policy instruments that significantly influence the development of land and the construction of housing. Growth management is an attempt to accommodate growth in a planned way that ensures adequate infrastructure in the right place at the right time, preserves public goods, minimises fiscal burdens and adverse interactions between land uses and improves the equitable distribution of the benefits of growth. The end result should be improved quality of life (Nelson *et al*., 2002).

State growth management laws

Growth management regulations have been adopted at local, regional and state levels since the early 1960s. By the early 2000s, thirteen states in the US had adopted state growth management legislation (Anthony, 2004). In many states with growth management schemes, a state agency has been created to ensure that state interests are reflected in local growth management programmes. Typically, such agencies prepare rules, offer technical assistance, and review and comment on locally prepared plans. However, the level of state oversight differs between programmes.

State growth management programmes have distinct advantages. They can require all communities within a state to adopt growth management practices and thereby ensure that benefits of growth management accrue to communities more broadly across the state. State legislation can help reduce the possibility of negative spillovers from growth-regulated cities to those that are not. The state can provide financial and administrative support to make such regulations work. For example, in Florida, the state budgeted about US$3 million for this in 1986 (Anthony, 2006). Because local governments receive about 40 per cent to 45 per cent of their annual budgets from state governments (Anthony, 2004), state regulations would receive serious attention from most local governments.

Anthony's (2004) research on the efficiency of state growth management laws in controlling urban sprawl in 49 states between 1982 and 1997 found that although state growth management regulations do seem to have made an impact in reducing urban sprawl, the impact is not significant. One possible reason is that state-mandated measures need to be implemented at the local level. If at the local level there is no political support for the state-mandated measures, regardless of how significant and comprehensive those measures are, their implementation will be weak. This is the case in Florida, where, in spite of state growth management law, local development planning in many jurisdictions is guided by the desire for more growth.

A review of the literature on urban containment policies in England, Seoul, Oregon and California by Dawkins and Nelson (2002) found that urban containment affects land prices no matter how it is implemented. Indeed, Nelson (1986) argues that if no land market effects can be found, then the policy is not working. Since a primary purpose of containment is to increase the desirability of redevelopment and infill development within the boundary, and reduce its desirability outside the boundary, one would expect land within a boundary to be more expensive (Dawkin and Nelson, 2002). While the increased land prices might be expected to result in higher density development to offset housing costs, this is not always the case in practice, although it appears to have been successful in Portland, Oregon, at least during the 1980s and 1990s. More recent studies, however, have found that Portland's Urban Growth Boundary (UGB) steered growth to Clark county in Washington state, which raises the question of cross jurisdiction boundaries (Jun, 2004).

Dawkin and Nelson (2002) conclude that the overall effect on house prices of urban growth boundaries depends on the style of implementation, the structure of local housing markets, the pattern of existing land ownership and the stringency of other local regulations. An important factor is whether planners actively monitor land supplies and adjust regulations to facilitate higher density development. Stemming house price inflation requires planners to be more proactive and what may be needed as part of any urban containment policy is a land supply monitoring system. The authors note that the demand side may also be more important than the UGB of itself. Relative differences in demand for housing have been found to contribute to housing market outcomes that are the opposite to what would be expected from a simple examination of the restrictiveness of local regulations. Regional economic shocks have also affected the Oregon housing market and the statewide planning programme may have been successful in mitigating house price inflation rather than the UGB per se. The relative elasticity of demand for housing, which is affected by the availability of substitutes, also affects house price inflation. But the most important policy implication from the review is that local planners play a significant role in determining the severity of house price inflation attributable to urban containment policies. Proactive measures by local planners, including development programmes that require the provision of affordable housing, are more effective than regulation in ensuring that the elimination of urban sprawl does not also eliminate affordable housing.

Portland, Oregon

Oregon is recognised as one of the leaders in 'smart growth' along with Florida and Washington. Oregon adopted growth management legislation in 1973 and Portland's UGB was proposed in 1977 and approved by the state in 1980. Portland's UGB has been the centre of debate between pro-market and government intervention advocates (Jun, 2004). The American Planning Association supports UGBs 'to promote compact and contiguous development patterns that can be efficiently served by public services and to preserve or protect open space, agricultural land, and environmentally sensitive areas' (Ding *et al*., 1999, p. 53, quoted in Jun, 2004). Against this it has been argued that UGBs can produce undesirable outcomes because they are not directly linked to the underlying market failures responsible for urban sprawl (Brueckner, 2000).

Jun (2004) evaluates the effects of Portland's UGB in terms of whether it controls sprawl and encourages infill development, promotes the use of public transport instead of the car, and maintains mobility. A detailed econometric analysis suggests that Portland has not been successful on these counts. The UGB has failed to encourage new residential development into the UGB, but significantly diverted new growth into Clark County, Washington state – the only county in the Portland Primary Metropolitan Statistical Area (PMSA) not included in the UGB. Thus Clark County acted as a safety valve for growth outside the UGB. It introduced a UGB in 1995, but new housing construction grew much faster than in the rest of the PMSA during 1980-2000. Jun (2004) also argues that encouraging phased development outside the UGB is not sufficient to make the UGB a binding constraint.

Other empirical analyses show conflicting results about the effects of UGBs on urban sprawl. Nelson and Moore (1993) analysed residential building permits and found that most regional development was directed within the UGB between 1985 and 1989, but considerable development continued outside the UGB. Richardson and Gordon (2001) find that

suburbanisation and decentralisation in Portland and Los Angeles were quite similar.

Provision of housing and related infrastructure

Until about 1970, affordable housing had been primarily a responsibility of either the federal government (through the construction of public housing) or the private sector (through the 'filtering' of old housing units to lower-income households). But in the 1970s, affordability problems began to emerge faster than either filtering or federal programmes – even new programmes such as federally subsidised but privately built housing – could address them. Across the US, new local housing measures arose in the 1970s in response to both state and federal pressure and to local officials and residents who wanted their communities to have a balanced supply of housing. After 1980, when the federal government effectively withdrew funding for new public housing, local governments increasingly supported both regulatory programmes and funding for affordable housing.

Inclusionary zoning (IZ)

Inclusionary zoning (IZ) is a land use policy intending to make it possible for some households with lower or moderate incomes to live in communities largely occupied by households with medium to higher incomes. It is a response by planners to criticisms of the exclusionary effects of the traditional land-use regulations (exclusionary zoning) which separated people by ethnicity and prevented undesirable land uses from entering communities (Nelson *et al*., 2002). IZ is presented by many as a cost-effective means of encouraging the production of affordable housing and overcoming the potential market pressures of inflexible planning regulations. These policies are termed 'inclusionary' because they either mandate or encourage real estate developers to incorporate into their market developments a proportion of homes that are sold or rented at below-market prices. In exchange, IZ programs offer ways to cover the financial losses developers incur on the IZ homes, for example by allowing developers to increase the overall size or density of a development (Schwartz *et al*., 2012).

IZ first came into use in the US during the 1970s. The oldest continuously running IZ program started in 1974 in Montgomery County, Maryland. It is also the largest IZ program, with the construction of more than thirteen thousand IZ homes. Over the past 40 years, IZ policies have spread in the US. While IZ is not universally accepted, it has entered the mainstream and is seen as one of the range of tools available to planners. This process has required both public and private sectors 'to re-evaluate conventional real estate practices, rethink traditional principles, and figure out how to make this complex and distinctive affordable housing strategy work successfully in hundreds of very different communities.' (Mallach and Calavita, 2010).

The best available estimates indicate that more than 500 localities in the US have adopted IZ in some form which have resulted in the development of 129,000 to 150,000 affordable units, most of which are in three states and the Washington, DC metropolitan area. Schwartz *et al*. (2012) find that IZ programmes locate a far greater proportion of IZ units in low-poverty neighbourhoods than other affordable housing programmes in the US.

The common characteristic of all IZ programs is the requirement that builders allocate a specific proportion of their development activity to 'affordable' housing. For mandatory programmes, it is common that builders have the alternative of paying a one-time fee rather than participating. Many programmes are voluntary or allow significant exemptions. Most IZ programmes offer developer incentives to compensate for the anticipated

reduction in revenue. One of the most common incentives, the density bonus, allows developers to build beyond the density ceiling. Other incentives to participate consist of impact fee waivers, fast-tracking of permits and construction subsidies.

The current trend in inclusionary housing programmes is a shift from the voluntary toward the mandatory end of the implementation spectrum. Five of the six largest cities to adopt IZ – Boston, Denver, Sacramento, San Diego and San Francisco – chose mandatory ordinances in the face of severe affordable housing shortages. New York has voluntary IZ which is applied as part of neighbourhood specific re-zonings. In August 2003, the first inclusionary housing ordinance in the Midwest became law when Highland Park, Illinois, an affluent North Shore suburb of Chicago, adopted a mandatory IZ law requiring a 20 per cent affordability component in any development with five or more units of housing (Brunick, 2004). In January 2004, Madison, Wisconsin, followed with its own mandatory programme. The ordinance requires developers of projects with ten or more units to price 15 per cent of them as affordable.

In general, Brunick (2004) finds that mandatory inclusionary housing programmes are better suited to produce housing that is affordable to low- and very-low-income households (households below 80 per cent and 50 per cent of the area's median income respectively). Under a mandatory inclusionary housing programme, developers will always know up front what is required of them. They also know up front what cost offsets they will receive in return for the affordable units. This certainty for developers may be a contributing factor to the success of the policy.

Federal and local government subsidies

A recent innovation in the US has been increased local spending on affordable housing. This may be funded via federal programmes or by state and local level allocations of funds. Federal programmes include Community Development Block Grants which have been allocated annually since 1974 to states, urban counties and cities to cover general urban renewal, including affordable housing and improved services. HOPE VI, HOME and Section 8 are federally-funded programmes to support and improve affordable housing. HOPE VI funds go to public housing authorities, HOME to states and localities and section 8 covers privately-owned rental units.

HOPE VI is specific to the public housing programme, providing funding for the demolition and redevelopment of 'distressed' public housing. The replacement housing is built at a smaller scale and lower density than the original developments, resulting in a loss of public housing units. Section 8 can refer to rental vouchers (housing Choice Vouchers) and to project-specific subsidies. For the most part, the government has not provided new project-based subsidies since the 1980s, except to help preserve existing subsidised housing developments. HOME is a block grant that can be used for a variety of housing types and purposes, including homeowner assistance, capital grants for the development of rental housing, and rental vouchers. When used to support rental housing, HOME funding is usually combined with other subsidies, such as the Low Income Housing Tax Credit.

Low income housing tax credit was introduced in 1986 and is the most successful federal programme in terms of the amount of affordable housing produced (Herbert *et al*., 2012). Developers apply for credit which they sell to private investors to raise equity for their projects. The credit is applied in a one-to-one ratio (each dollar of credit reduces tax liability by one dollar) over ten years.

At local level, municipalities have increasingly allocated their own funds to affordable housing. Thus in the last 25 years, New York City has spent billions of its own general revenue funds to support affordable housing. Other jurisdictions have tapped special sources of revenue for housing. California, for example, requires local government redevelopment agencies to set aside 20 per cent of the increased tax increment generated by the development in their project areas for affordable housing (Pendall *et al*., 2006).

Impact fees

Impact fees (also known as development impact fees, system development charges and connection charges) are charges levied on new development to pay for the construction of off-site capital improvements that benefit the development. Impact fees are a political response to the notion that development should pay its own way. Thus growth management schemes encourage the use of impact fees to finance development (Anthony, 2006). In some communities, impact fees are actually considered a pro-growth tool because of their ability to defuse anti-growth lobbies or NIMBYism and thus increase the likelihood that the development will be approved. In addition, because they are typically used as a replacement for negotiated exactions[10], impact fees add speed and predictability to the development process. Impact fees are also more equitable than informal systems of negotiated exactions because the fee reflects the actual impact different housing units have on community facilities and are likely to generate considerably more revenue (Newport Partners *et al*., 2008). Impact fees are now typically assessed using a fee schedule that sets out the charge per dwelling unit or per 1,000 square feet of non-residential floor space.

Been's (2005) review of existing literature reported that there is insufficient evidence that impact fees raise house prices if the net price of housing – the price after offsetting benefits, such as amenities or savings on alternative financing mechanisms, are accounted for – is taken into account. But she suggests that impact fees can be abused – either to exclude residents with a low-to-moderate income or people of colour from communities, or to exploit new homebuyers who have no vote in the community.

There have been many studies that attempt to measure the impact of containment and growth management policies on housing and land prices and hence on housing affordability. Most find that land and house prices increase faster within the growth boundary and at slower rates outside it (see for example Pollakowski and Wachter, 1990 for a review). In their comprehensive review of the academic literature on the effect of growth management on affordable housing, Nelson *et al*. (2002) point out that most research on the effect of land-use controls on housing prices and affordability has focused on single-family owner occupied housing, and many studies have considered the effects of regulations in some of the most expensive housing markets in the US, especially California, Florida, Oregon and metropolitan Washington, DC. They also find that:

1. Market demand, not land constraints, is the primary determinant of housing prices;
2. Growth management policies can raise the price of housing. This is because these policies improve the supply and location of affordable housing and accommodate other development needs, which raises the desirability of the community and thus the price of housing;
3. Traditional land use practices tend to be 'laissez-faire' in their approach to affordable housing, or they deliberately zone for low-density, expensive

homes to exclude low-income households or communities of colour. Properly designed growth management programs, on the other hand, aim to overcome these exclusionary effects. Properly designed growth management programs also mitigate the adverse effects of urban growth as well as the adverse price effects on lower-income households.

Tax Increment Financing

Tax increment financing (TIF) is a mechanism by which a locality can borrow against the increase in revenue expected after the completion of a regeneration project and spend the funds on infrastructure and affordable housing. In order for an area to qualify for TIF designation, it has to be either a blighted or a conservation area. When designated as a TIF district, the amount of tax revenue the area currently generates provides a baseline. The property tax-base is then frozen for all taxing jurisdictions (schools, parks) within the TIF district at the time of adoption. The additional tax revenue collected in subsequent years is used to finance the redevelopment costs and, when the project is completed and paid for, the TIF district is then dissolved (McGreal *et al*., 2002).

The TIF programme assumes that a city will eventually recover the cost of its investment and expenditure in acquiring and preparing a site through the increase in taxes it can introduce once the redevelopment is completed. As vacant and dilapidated properties are developed with TIF assistance and return to productive and appropriate uses, property values increase and so does the tax revenue. The increment created between the baseline and the new value is captured and used solely for improvements within the TIF district. In essence, the increment can be used as a source of revenue to pay back bonds issued to cover up-front costs, or it can be used on a pay-as-you-go basis for individual projects. As the TIF expires after 23 years, the city's investments in the redevelopment projects within the designated TIF are paid back and property tax revenues are shared by all the different taxing entities.

In purely financial terms, most analyses of TIFs have agreed that the scheme generally works; however, the true net costs or benefits of state and local incentive packages are harder to estimate. Most city officials assume that development would not have taken place without incentives. Initially, TIF was designed to cure blighted areas, to redevelop properties and to meet the social and economic needs of the people living in the area. However, TIF in essence has become an incentive programme for developers, who often play off competing municipalities against one another. Other problems associated with the initiative include the displacement of residents and businesses, favouritism or cronyism with respect to particular developers and contractors in the declaration of TIF areas, and projects that have not materialised or have been unsuccessful (McGreal *et al*., 2002).

New Jersey case study example

New Jersey (NJ) is an attractive and strategic area for housing and commercial development. It also has a productive agricultural region and several ecologically sensitive areas, of which the main ones are the wetlands in the north east (Meadowlands) and the Pine Barrens in the south (Pinelands). Although some counties are dominated either by urban or by rural landscapes, a number must balance contrasting land-use needs. Population density is highest near the borders with Philadelphia (centre west) and New York City (north east) and ranges from forty thousand people in a square mile to under ten. Despite being the most densely populated state, NJ grew at a faster rate than Pennsylvania and New York between 2000

and 2010. The two fastest growing counties are both located in the less developed southern part of the state (US Census 2010).

New Jersey is famous for the 1975 Mt. Laurel decision hat ruled that each municipality has the duty to help meet its region's need for affordable housing and empowered developers to sue a municipality if they are refused the opportunity to build such housing. The Mt. Laurel decision prompted the state to pass the Affordable Housing Act of 1985 that set out affordable housing targets for each municipality. For the most part, municipalities have sought to meet these targets through inclusionary housing (builder's remedy) in which developers can build at higher densities than would otherwise be allowed provided that 20 per cent of the units are set aside for low or moderate income households.

Planning: legislation and legal concepts

The authority to control land use is granted to municipalities by the New Jersey Municipal Land Use Law, which came into effect in 1976. Under this law the municipality defines a master plan, currently reviewed every six years, and a zoning ordinance to frame future growth. Some towns in New Jersey have begun to develop form-based codes to replace or complement the traditional separation of use zoning, as part of a national trend towards physical planning aimed at urban renewal or curbing of sprawl.

The New Jersey Local Redevelopment and Housing Law (LRHL) was enacted in 1992. It strengthens and simplifies processes of regeneration, increasing the ease and transparency in the designation of an area for redevelopment, which must be reviewed and approved by the Department for Community Affairs. It authorises redevelopment agencies and housing authorities to use eminent domain (compulsory purchase) and issue bonds, and it allows the possibility of tax abatements.

The concept of 'home rule' is an important shaping factor in the housing context of New Jersey, where residents and officials deal with the effects of low density housing and some of highest property taxes in the country.

The tradition of such independence also creates opposition to shared services. However, the principle of home rule can over-burden small municipalities financially when attempting to provide essential services. For example, school districts in New Jersey are organised at regional, county, and municipal levels, in contrast with neighbouring states' county-wide school systems. There are nearly 600 school boards, which means that spending decisions are taken at very local levels. In the case where a municipality holds responsibility for a school district, the extra burden can drive small areas to avoid dense and multi-family housing, in turn hindering the efficient use of land, impacting adversely on house prices, and affecting the location choices of businesses.

Other municipal services are coming under pressure due to budget cuts, and a two percent increase ceiling on property taxes was enacted in 2010, leading towns to yield on home rule and consider consolidation or shared services which may have the potential to change growth patterns. While this consolidation process is only just beginning, in principle it could provide economies of scale and improve service provision at lower cost.

As in much of the US, in New Jersey planning above the municipal level tends to be permissive rather than obligatory. County Planning Boards create master plans for the physical development of the county which contain recommendations for municipalities. Although they have the responsibility of approving applications for site plans and subdivision of land that affect county infrastructure, there is no principle of subordination and county boards can only comment on the zoning or master plans of the municipalities.

Similarly, the State Development and Redevelopment Plan provides a vision for future growth, to guide municipal planning over the long term. The most recent State Plan (2011) highlights two key goals for new housing: more transparent decision making ('predictability') and a focus on densification ('spatial efficiency'). This reflects recent problems of a complex regulatory environment combined with a slowdown in construction, an increase in per capita land consumption, and pressure on state and local budgets necessitating the containment of spending on infrastructure. It is thus hoped that infrastructure will be less costly and more efficient where population densities are higher. This is the opposite of the view that low density housing attracts wealthier populations with fewer demands on public services.

Tools to promote and regulate housing production in New Jersey

Like many states, New Jersey has utilised federal funding, including HOPE VI, HOME and Section 8, low-income tax credits and also community development block grants which have been allocated yearly since 1974. States, urban counties, and cities are eligible for these grants which cover general urban renewal, including home repairs and improvement of services.

At local level, **acquisition funds** can be used for development or for preservation of land. The federal government is sometimes involved in the distribution of funds, such as the recent 'Neighborhood Stabilization Program' (2009–12) which allocated grants for municipalities and developers (both for- and non-profit) to purchase and redevelop foreclosed properties in order to prevent blight.

Municipal or state **housing trust funds** are directly administered by a locality to reach their affordable housing targets. Their resources often come from fees from development (impact fees, etc). New Jersey also has a statewide Affordable Housing Trust Fund that municipalities can apply to (Department of Community Affairs, 2008).

As in several states, **tax increment financing** was established in New Jersey in 2002 to promote regeneration of inner-city and blighted areas.

Other mechanisms used in New Jersey are explained in the following paragraphs.

Clustering: A programme to direct development to specific areas can be permissive, like residential clustering and non-contiguous clustering, or highly structured, as in transfer of development rights (TDR).

Residential clustering encourages the preservation of open space on a single site, while non-contiguous clustering and TDR provide incentive for owners of land (of environmental, historical, or agricultural importance) to maintain land without the penalisation and politicisation of traditional zoning, which can only prohibit development, and without municipal funds having to be used to acquire land the community wishes to protect.

Non-contiguous clustering was created by a 1995 amendment to the MLUL. Less complex than TDR, and not requiring state review, non-contiguous clustering depends on cooperation between the landowner, developer, and the municipality. In exchange for preservation of one or more lots (in the sending area), the developer can use a zone or several parcels (the receiving area) to construct a single, much denser cluster.

In 2004, the State of New Jersey was the first in the US to enact legislation for **TDR**. Under this system landowners in a sending area can sell

development credits (calculated using a formula based on units or square footage) which allow development in a receiving area, generally already connected to public utilities, through the mediation of a local, county, or State TDR bank.

Community development corporations are non-profit organisations, sometimes closely tied to local government, with the aim of revitalising areas needing economic development and housing. An example of CDC action: Two infill projects (low-income and mixed-income housing) in Newark were recently accomplished through a joint venture between the private RPM Development Group and the CDC New Community Corporation. The city of Newark obtained funding for these projects from federal and state grants and loans (including Low Income Housing Tax Credit (LIHTC), a loan from the NJ Housing and Mortgage Finance Agency, funds from the Department for Community Affairs (New Jersey) (DCA) and HOME, and a loan from a private bank).

Eminent domain (UK compulsory purchase) has an important role in urban renewal in built up areas as an effective tool to recreate a designated area deemed 'blighted'. Its use is concretised in the NJ LRHL.

Municipal Land Banks: Municipalities may acquire lots for development or redevelopment with a view to group them and control future construction.

Facilitation tools
Density bonus allows a developer to build more units than prescribed by the zoning ordinance, and can be used to encourage the inclusion of affordable housing.

Early plan review and expedited permitting relieve uncertainty and can lower costs for developers.

The **Federal Small Business Liability Relief and Brownfields Revitalization Act** of 2002 reduces regulations and litigations and provides financial assistance for assessment and cleanup, making redevelopment of brownfields more attractive.

Rehabilitation Subcode is a 1998 amendment to the state building code which relaxed certain requirements (such as corridor width) to facilitate renovation of older buildings. It has increased redevelopment substantially[11], in particular in the densest urban centres, where redevelopment appears to have been less affected by the recession than new construction (Evans 2010).

Fees
Demolition fees can serve both to discourage elimination of housing, as well as provide a source of revenue for municipal housing trust funds.

Impact fees or exactions are negotiated between developers and municipalities and are applied towards the creation of new infrastructure to serve development. They are seen as more equitable than raising property taxes on all residents.

Conclusion

In the USA planning is decentralised and varies between and within different States, although land use zoning exists almost everywhere. However, these wide differences mean that there is a range of instruments that have been used across the country, often with considerable success. Those that seem most appropriate to the UK are urban growth management, tax increment financing, increased densities in return for a proportion of affordable housing, and housing land trusts.

Notes

1 Gross residential area adds to net residential area (the land occupied by residential housing plus the streets and pathways required to access them) and the land occupied by auxiliary land uses such as local parks and open spaces, neighbourhood community facilities, primary schools, and local shopping and services. The size of the gross residential density is influenced by the degree of spatial integration between residential and non-residential uses, and among different non-residential uses, as opposed to their complete segregation.

2 Ministry of Land, Infrastructure, Transport and Tourism, Japan (MILT) *An Overview of Spatial Policy in Asian and European Countries: Denmark* http://www.mlit.go.jp/kokudokeikaku/international/spw/general/denmark/index_e.html

3 Ministry of Land, Infrastructure, Transport and Tourism, Japan (MILT) *An Overview of Spatial Policy in Asian and European Countries: Denmark* http://www.mlit.go.jp/kokudokeikaku/international/spw/general/denmark/index_e.html

4 Calculated from *Danmarks Statistikbanken* BOL 101 http://www.statistikbanken.dk/statbank5a/default.asp?w=1920

5 A note on home ownership: France has a lower percentage of owners than the UK (around 58 per cent compared to 67 per cent in the UK). The drive to increase ownership, particularly through the interest-free loan and other subsidies, has had both positive and negative effects. The interest-free loan has been criticised both for not having a wide enough impact, and for drawing less financially solvent households into debt, as well as for promoting urban spread.

6 http://www.senat.fr/questions/base/2007/qSEQ071202973.html

7 Ministère de l'Égalité des territoires et du Logement, Taxation of land. March 19, 2012 http://www.developpement-durable.gouv.fr/Reforme-de-la-fiscalite-de-l.html

8 Ministry for the Environment, *Planning and Urban Design* http://www.mfe.govt.nz/publications/rma/building-competitive-cities-technical-working-paper/page1.html

9 The Cantons are the states which compose the federal state of Switzerland. The Swiss cantons are very different in size: Zurich has more than 1 million inhabitants, Appenzell Innerrhoden some fifteen thousand.

10 Some confusion exists with the terminology of exactions and impact fees. Although 'exactions' is the umbrella term for all the various types of dedications, fees and linkage programs, some people use the term to describe only the first generation devices: onsite and offsite dedications and fees in lieu of dedications. Impact fees were a second generation form of exaction.

11 Evans (2010) p.2 'The 204 municipalities in New Jersey that were already at least 90 percent built-out as of 2002 together accounted for 15.1 percent of total building permits issued statewide in the 1990s, but more than doubled their share of the total, to 33.6 percent, in the 2000s.'

References

Andrews, D., Sánchez, A. and Johansson, Å. (2011a) *Housing Markets and Structural Policies in OECD Countries*. OECD Economics Department Working Papers No. 836. Paris: OECD Publishing

Andrew, D., Sánchez, A. and Johansson, Å. (2011b) 'Housing and the economy: policies for renovation'. Chapter 4 in *Economic Policy Reforms 2011: Going for Growth*. Paris: OECD Publishing. Available at: www.oecd.org/social/labour/economicpolicyreformsgoingforgrowth2011.htm

Anthony, J. (2004) 'Do state growth management regulations reduce sprawl?' *Urban Affairs Review*, 39(3): pp. 376–97

Anthony, J. (2006) 'State growth management and housing prices'. *Social Science Quarterly*, 87(1): pp. 122–41

Auckland Regional Council (ARC) (1999) *Metropolitan Urban Limits in the Auckland Region: Impact on Land Prices*. Auckland, New Zealand: ARC

Auckland Regional Council (ARC) (2007) *Growing Smarter: The Auckland Region in the 21st Century – An Evaluation of the Auckland Regional Growth Strategy 1999*. Auckland, New Zealand: ARC. Available at: www.arc.govt.nz/albany/fms/main/Documents/Auckland/Aucklands%20growth/Growing%20Smarter%20-%20RGS%20Evaluation.pdf

Australian Government (2010) *Australia's Future Tax System: a Review* (Henry Review). Available at: http://taxreview.treasury.gov.au/content/Content.aspx?doc=html/pubs_reports.htm

Baccaïni, B. and Levy, D. (2009) 'Recensement de la population de 2006. Les migrations entre départements: le Sud et l'Ouest toujours très attractifs'. *Insee Première* 1248, July 2009

Bae, C. (1998) 'Korea's greenbelts: impacts and options for change'. *Pacific Rim Law and Policy Journal*, 7(3): pp. 479–502

Bae, C. and Jun, M. (2003) 'Counterfactual planning: what if there had been no greenbelt in Seoul?'*Journal of Planning Education and Research*, 22: pp. 374–83

Baing, A. (2010) 'Containing urban sprawl? Comparing brownfield reuse policies in England and Germany'. *International Planning Studies*, 15(1): pp. 25–35

Ball, M. (2012) *European Housing Review 2012*, RICS Research Report. London: Royal Institution of Chartered Surveyors

Barlow, J., Bartlett, K., Hooper, A. and Whitehead, C. (2002) *Land for Housing: Current Practice and Future Options*. York: Joseph Rowntree Foundation. Available at: www.jrf.org.uk/publications/land-housing-current-practice-and-future-options

Beckman, G., Breuer, B., Crome, B., Fuhrich, M., Gatzweiler, H.-P., Goeddecke-Stellman, J., Guttler, H., Metzmacher, M., Muller, A., Renner, M., Schmitz, S., Thul, B., Walther U.-J., Weigandt, C.-C. and Zarth, M. (2000) *Urban Development and Urban Policy in Germany*. Bonn: Federal Office for Building and Regional Planning

Been, V. (2005) 'Impact fees and housing affordability'. *Cityscape: A Journal of Policy Development and Research*, 8(1): pp. 139–85

Béhar, D. (2010) 'Faut-il vraiment territorialiser la politique de l'habitat?' *Habitat & Société, Revue de l'Union Sociale pour l'Habitat*, 59 (Sept 2010), pp. 16–18

Béhar, D. and Estèbe, P. (2009) 'Aménagement du territoire: une mise en perspective'. *L'Etat de la France 2009–2010 19ème édition* (Paris: La Découverte) pp. 288–97

Béhar, D. and Estèbe, P. (2011) 'Réforme territoriale: La révolution silencieuse du gouvernement local'. *L'Etat de la France 2011–2012* (Paris: La Découverte) pp. 298–301

Bengston, D. N. and Youn, Y.-C. (2006) 'Urban containment policies and the protection of natural areas: the case of Seoul's greenbelt'. *Ecology and Society*, 11(1). Available at: www.ecologyandsociety.org/vol11/iss1/art3/

Birdsong, B. (1998), 'Adjudicating sustainability: the Environment Court and new Zealand's Resource Management Act'. Final report of Ian Axford Fellowship Programme. Available at: www.filbright.org.nz/wp-content/uploads/2011/12/axford1998-birdsong.pdf

Bonvalet, C. and Lelièvre, E. (1997) 'The transformation of housing and housing structures in France and Great Britain'. *International Journal of Population Geography*, 3(3): pp. 183–201

Booth, P., Breuillard, M., Fraser, C. and Paris, D. (2007) *Spatial planning systems of Britain and France: a comparative study*. London: Routledge

Bout, D. and Hensher, D. (2007) 'The dark side of making transit irresistible: the example of France'. *Transport Policy*, 14(6), pp. 523–32

Brueckner, J. K. (2000) 'Urban sprawl: diagnosis and remedies'. *International Regional Science Review*, 23(2), pp. 160-170

Brunick, N. J. (2004) 'The inclusionary housing debate: the effectiveness of mandatory programs over voluntary programs'. *Zoning Practice*, 9: pp. 2–7

Buitelaar, E. (2010) 'Crack in the myth: challenges to land policy in the Netherlands'. *TijdscrhiftvoorEconomische en SocialeGeografie*, 101(3): pp. 349–56

Buitelaar, E., 2012, 'Transparency of land markets: not only a matter of market outcomes. Experiences from the Netherlands', *Études Foncières*, n. 159. Available at: www.etudesfoncieres.fr

Bunker, R. and Searle, G. (2009) 'Theory and practice in metropolitan strategy: situating recent Australian planning'. *Urban Policy and Research*, 27(2), pp. 101–16

Busck, A. G., Hidding, M. C., Kristensen, S. B. P., Persson, C. and Præstholm, S. (2009) 'Planning approaches for urban areas: Case studies from Denmark, Sweden and the Netherlands'. *Danish Journal of Geography*, 109(1): pp. 15–32. Available at: http://rdgs.dk/djg/pdfs/109/1/GEO_109_1_2.pdf

Buxton, M. and Scheurer, J. (2007) 'Density and outer urban development in Melbourne'. *Urban Policy and Research*, 25(1): pp. 91–111.

Calavita, N. and Mallach, A. (eds) (2010) *Inclusionary Housing in International Perspective: Affordable Housing, Social Inclusion and Land Value Recapture*. Cambridge, MA: Lincoln Institute of Land Policy

Castel, J.-C. (2010) 'Ville dense, ville diffuse, les deux faces de l'urbanisation'. Études Foncières, 147 (Sept—Oct): pp. 14–20

Castel, J.-C. (2012) 'La densité au pluriel. Un apport à la recherché sur les coûts d'urbanisation'. Études Foncières, 142 (July–Aug): pp. 13–17

Central Statistics Office (2012), *Census of Population of Ireland, Dublin*. Dublin: Stationery Office. Available at: www.cso.ie/en/census/

Cole, A. (2006) 'Decentralization in France: central steering, capacity building and identity construction'. *French Politics*, 4: pp. 31–57.

Comby, J. and Renard, V. (1996) *Les Politiques Foncières*. Collection 'Que sais-je?' Paris: PUF. Available at: http://vincentrenard.eu/index.php?option=com_content&task=view&id=7&Itemid=17

Corry, M., Mather, G. and Smith, D. (2012) *Compensating for Development: How to Unblock Britain's Town and Country Planning System*. London: The Infrastructure Forum. Available at: www.epfltd.org/images/Compensating%20for%20Development_How%20to%20unblock%20Britain's%20Town%20%20&%20Country%20planning%20sytem.pdf

Danish Architecture Centre (2012). Available at: www.dac.dk/en/dac-life/copenhagen-x-gallery/realized-projects/vildrose-project/

Dawkin, C. J. and Nelson, A. C. (2002) 'Urban containment policies and housing prices: an international comparison with implications for future research'. *Land Use Policy*, 19(1), pp. 1-12

Department for Communities and Local Government (DCLG) (2010) *Promoting Investment in Private Rented Housing Supply: International Policy Comparisons*. London: DCLG. Available at: www.communities.gov.uk/documents/housing/pdf/1759530.pdf

Department of Community Affairs (2008) *Affordable Housing Trust Fund*. Available at: www.state.nj.us/dca/services/lps/hss/ahtf.html

Department of Building and Housing (2008) *Adequacy of the Auckland Region's Residential Land Supply*. Wellington: Department of Building and Housing. Available at: www.dbh.govt.nz/auckland-regions-residential-land-supply

Department of Building and Housing (2011) *New Zealand Housing Report 2009/2010: Structure, Pressures and Issues*. Wellington: Department of Building and Housing. Available at: www.dbh.govt.nz/UserFiles/File/Publications/Sector/pdf/2009-2010-nz-housing-report.pdf

DGCL (2012) 'Bilan de l'intercommunalité avant la mise en œuvre des SDCI'. *Bulletin des informations statistiques*, 88. Available at: www.dgcl.interieur.gouv.fr/sections/a_votre_service/statistiques/bis/bis_88___2012___bila/downloadFile/file/BIS_88.pdf?nocache=1331542922.06

Dieleman, F. M., Dijst, M. J. and Spit, T. (1999) 'Planning the compact city: the Randstad Holland experience'. *European Planning Studies*, 7(5): pp. 605–21

DLA Phillips Fox (2008) *Review of Financial Contributions and Development Contributions*. Wellington, New Zealand: Ministry for the Environment and Local Government New Zealand. Available at: www.qualityplanning.org.nz/qp-research/review-financial-contributions/review-of-financial-contributions.pdf

Driant, J.-C. (2011) 'Pourquoi manque-t-il des logements en France?' *Métropolitiques* 23 Sept 2011. Available at: www.metropolitiques.eu/Pourquoi-manque-t-il-des-logements.html

Duffy, P. (2000) 'Trends in nineteenth and twentieth century settlement'. In T. Barry (ed.) *A History of Settlement in Ireland*, London: Routledge, pp. 206–8.

Estèbe, P. (2004) 'La décentralisation: 1982, Acte I. Approche historique et critique'. Demain, la décentralisation, Profession Banlieue. Available at: http://master.sciences-po.fr/sites/default/files/estebe.pdf

Evans, A. and Hartwich, O. (2005) *Bigger, Better, Faster, More: Why Some Counties Plan Better than Others*. London: Policy Exchange.

Evans, T. (2010) '"Built-out" but still growing. Building permit data point toward more redevelopment'. Trenton: NJ Future. Available at: www.njfuture.org/research-publications/research-reports/built-out-but-still-growing/

Evans, T. (2012) 'Cities (Of All Sizes) Lead the State in Population Growth'. Trenton: NJ Future. Available at: www.njfuture.org/2012/07/18/cities-population-growth/?utm_source=Cities+Lead+the+State+Population+in+Growth&utm_campaign=Future+Facts+7-18-2012&utm_medium=email

Fisher, D. E. (1991) 'The resource management legislation of 1991: A judicial analysis of its objectives', in *Resource Management*, Vol. 1A. Wellington: Brooker and Friend Ltd, Intro 1–30

Forster, C. (2006) 'The challenge of change: Australian cities and urban planning in the new millennium'. *Geographical Research*, 44(2): pp. 173–182.

Franqueville, L. (2012) 'Logement : Cécile Duflot précise ses premières mesures'. *Le Moniteur*, 18 July 2012. Available at: www.lemoniteur.fr/145-logement/article/actualite/18322055-logement-cecile-duflot-precise-ses-premieres-mesures

Gale, D. E. (1992) 'Eight state-sponsored growth management programs: a comparative analysis'. *Journal of the American Planning Association*, 58(4): pp. 425–39.

Galland, D. (2012) 'Understanding the reorientations and roles of spatial planning: the case of national planning policy in Denmark'. *European Planning Studies*, 20(8): pp. 1359–92.

Geurs, K. T. and van Wee, B. (2006) '*Ex-post* evaluation of thirty years of compact urban development in the Netherlands'. *Urban Studies*, 43(1): pp. 139–60.

Gkartzios, M. and Norris, M; (2011) '"If you build it, they will come": Governing property-led rural regeneration in Ireland'. *Land Use Policy*, 28 (3): pp. 486–494.

Gkartzios, M. and Scott, M. (2009) 'Planning for rural housing in the Republic of Ireland: from national spatial strategies to development plans'. *European Planning Studies*, 17(12): pp. 1751–80.

Goodman, R., Buxton, M., Chhetri, P., Schuerer, J., Taylor, E. and Wood, G. (2010) 'Planning reform, land release and the supply of housing'. *AHURI Positioning Paper No. 126. Australian Housing and Urban Research Institute*. Melbourne: RMIT Research Centre. Available at: www.ahuri.edu.au/publications/download/30590_pp

Grimes, A. and Liang, Y. (2007) 'Spatial determinants of land prices: Does Auckland's Metropolitan Urban Limit have an effect?' *Applied Spatial Analysis*, 2: pp. 23–45.

Grimes, A., Aitken, A., Mitchell, I. and Smith, V. (2006) *Housing Supply in the Auckland Region 2000–2005*. A Report for CHRANZ. Available at: www.motu.org.nz/publications/detail/housing_supply_in_the_auckland_region_2000_2005

Gurran, N. (2008) 'International practice in planning for affordable housing: implications for Australia'. Paper presented at the Australasian Housing Researchers' Conference. Available at: http://mams.rmit.edu.au/pp2gczrttzuy.pdf

Gurran, N. (2011) *Australian Urban Land Uses: Principles, Systems and Practice*. Sydney: Sydney University Press

Gurran, N. and Whitehead, C. (2011) 'Planning and affordable housing in Australia and the United Kingdom: a comparative perspective'. *Housing Studies,* 26 (7 and 8): pp. 1193–214

Gurran, N., Ruming, K., Randolph, B. and Quintal, D. (2008) 'Planning, government charges, and the costs of land and housing'. *AHURI Positioning Paper No. 109. Australian Housing and Urban Research Institute*. Melbourne: RMIT Research Centre. http://www.ahuri.edu.au/publications/p70393/

Gurran, N., Ruming, K., Randolph, B. and Quintal, D. (2009) 'Counting the costs: planning requirements, infrastructure costs and residential development in Australia'. *Australian Housing and Urban Research Institute Final Report Series* 140. Sydney: UNSW/UWS Research Centre and Sydney Research Centre

Ha, S.-K. (2002) 'The urban poor, rental accommodations, and housing policy in Korea'. *Cities*, 19(3): pp. 195–203.

Ha, S.-K. (2010) 'Housing crisis and policy transformations in South Korea'. *International Journal of Housing Policy*, 10(3): pp. 255–72.

Halleux, J.-M., Marcinczak, S. and van der Krabben, E. (2012) 'The adaptive efficiency of land use planning measured by the control of urban sprawl. The cases of the Netherlands, Belgium and Poland'. *Land Use Policy*, 29(4): pp. 887–98.

Hamnett, S. and Freestone, R. (eds) (2000) *The Australian Metropolis: A Planning History*. Sydney: Allen & Unwin.

Hauri, E., Steiner, V. and Vinzens, M. (2006) 'Human Settlement in Switzerland: Spatial Development and Housing'. *Housing Bulletin, vol. 78*. Grenchen, Switzerland: Federal Office for Housing.

Hayashi, K. (2000) *Land Readjustment in International Perspectives: Applicability and Constraints of Technology Transfer in Urban Restructure*. Available at: www.earoph.info/pdf/2000papers/31.pdf

Hayden, A., Gray, P., McAnulty, U., O'Malley, C. and Jordan, B. (2010) 'The private rented sectors in Northern Ireland and the Republic of Ireland: a case study in convergence analysis'. *International Journal of Housing Policy*, 10(4): pp. 421–41.

Herbert, C. E., Belsky, E. S. and Apgar, W. C. (2012) 'Critical housing finance challenges for policymakers: defining a research agenda'. *Working Paper 12-2*. Cambridge, MA: Joint Center for Housing Studies of Harvard University. Available at: www.jchs.harvard.edu/research/publications/critical-housing-finance-challenges-policymakers-defining-research-agenda

Hill, G. (2008) *The Effectiveness of the Auckland Metropolitan Urban Limit – Ring-fencing Urban Development*. Paper presented at the Environmental Defence Society Conference, 11–12 June. Available at: www.edsconference.com/content/docs/papers/Hill,%20Greg.pdf

Illner, M. and Andrle, A. (1994) 'The regional aspect of post-communist transformation in the Czech Republic'. *Czech Sociological Review*, 2(1): pp. 107–27.

INSEE (2009) *Bulletin Statistique*. National Institute for Statistics and Economic Studies, Government of France

Institut d'Aménagement et d'Urbanisme de l'Île-de-France (2012) 'La gouvernance du logement en Ile-de-France: Étude relative à la création d'une autorité organisatrice du logement'. 19 June 2012. Available at: www.iau-idf.fr/fileadmin/.../Rapport_IAU_AOL_19_juin_2012.pdf

Institut Nexity (2008) 'Une nouvelle gouvernance territoriale: Les propositions de l'Institut Nexity pour le logement. Politique du logement et mutations socio-économiques des territoires'. *La Revue Enjeux Logement* 2. Jan 2008. Available at: www.lab-urba.fr/articles/driant_Revue_Enjeux_Logement_N2.pdf

Interministerial Agency for Spatial Planning and Competitiveness (DIACT) and Ministry of Foreign Affairs (2006) *Spatial Planning and Sustainable Development Policy in France*. Paris: DIACT

Jun, M.-J. (2004) 'The effects of Portland's Urban Growth Boundary on urban development patterns and commuting'. *Urban Studies*, 41 (7), pp. 1333–48

Kemp, P. and Kofner, S. (2010) 'Contrasting varieties of private renting: England and Germany'. *International Journal of Housing Policy*, 10(4), pp. 379–98.

Kim, K.-J. (2001) 'Inner city growth management problem in Seoul: residential rebuilding boom and planning issues'. Mimeo. Available at: http://up.t.u-tokyo.ac.jp/SUR/papers/kim.pdf

Kim, K.-H. (2001) 'Spatial policies towards the Seoul Capital Region'. *GeoJournal*, 53(1): pp. 17–28.

Kim, C.-H. and Kim, K.-H. (2000) 'The political economy of Korean government policies on real estate'. *Urban Studies*, 37(7): pp. 1157–69.

Kim, K.-H. and K., C.-H. (2002) *What Drives Korean Land Use Regulations?* Paper presented to the AsRES-AREUEA conference in Soeul, 2002 http://hompi.sogang.ac.kr/kyungkim/freeboard/papers/2002output/what%20drives%20land%20use%20regulations%20in%20korea.pdf

Konursay, S. Y. (2004) *Land Readjustment Process in Urban Design: Project Management Approach*. İzmir: İzmir Institute of Technology

KorthalsAltes, W. K.(2007) 'The impact of abolishing social-housing grants on the compact-city policy of Dutch municipalities'. *Environment and Planning A*, 39(6): pp. 1497–512.

KorthalsAltes, W. K. and Tambach, M. (2008) 'Municipal strategies for introducing housing on industrial estates as part of compact-city policies in the Netherlands'. *Cities*, 25(4): pp. 218–29.

Kunzmann, K. R. (2001) 'State planning: a German success story?' *International Planning Studies*, 6(2): pp. 153–66.

Lacaze, J. P. (2006) *La transformation des villes et les politiques urbaines: 1945–2005*. Paris: Presses de l'Ecole nationale des ponts et chaussées

Lux, M. (2009) *Housing Policy and Housing Finance in the Czech Republic during Transition: An Example of the Schism between the Still-living Past and the Need of Reform*. The Netherlands: Delft University of Technology.

Maclennan, D. (2008a) *Focussing on the Housing System and Modernising Housing Policies*. A Report for the Centre for Housing Research. Wellington, New Zealand: Centre for Housing Research

Maclennan, D. (2008b) *Housing, Economic Change and Governance of Metropolitan Areas*. A Report for the Centre for Housing Research. Wellington, New Zealand: Centre for Housing Research

Maier, K. (2000) 'The role of strategic planning in the development of Czech towns and regions'. *Planning Practice and Research*, 15(3): pp. 247–55.

Mallach, A. and Calavita, N. (2010) 'United States: From radical innovation to mainstream housing policy'. In Calavita N and Mallach A (eds) *Inclusionary Housing in International Perspective: Affordable Housing, Social Inclusion and Land Value Recapture*. Cambridge, Mass.: Lincoln Institute of Land Policy, pp. 15–18

Mann, S. (2009) 'Institutional causes of urban and rural sprawl in Switzerland'. *Land Use Policy*, 26(4): pp. 919–24.

McGreal, S., Berry, J., Lloyd, G. and McCarthy, J. (2002) 'Tax-based mechanisms in urban regeneration: Dublin and Chicago models,' *Urban Studies*, 39(10): pp. 1819–31.

McGuirk, P. and MacLaran, A. (2001) 'Changing approaches to urban planning in an "entrepreneurial city": the case of Dublin'. *European Planning Studies*, 9(4): pp. 437–57.

Milligan, V. (2003) 'How different? Comparing housing policies and housing affordability consequences for low income households in Australia and the Netherlands'. *Netherlands Geographical Studies*, No. 318. Utrecht: Royal Dutch Geographical Society

Milligan, V., Gurran, N., Lawson, J., Phibbs, P. and Phillips, R. (2009) 'Innovation in affordable housing in Australia: bringing policy and practice for not-for-profit housing organisations together'. *Australian Housing and Urban Research Institute Final Report Series* 134

Muggli, R. (not dated) *Spatial Planning in Switzerland: a Short Introduction*, VLP-ASPAN. Available at: www.vlp-aspan.ch/files/documents/landusech.pdf. Trans. Margaret Coffey

Myant, M. and Smith, S. (2006) 'Regional development and post-communist politics in a Czech region'. *Europe-Asia Studies*, 58(2): pp. 147–68.

National Housing Supply Council (2011) *State of Supply Report 2011*. Australian Government.

Needham, B. (2010) *Institutions for Housing Supply and Their Effects*. Paper presented at Research seminar, Department of Land Economy, University of Cambridge, 3 March.

Needham, B. (2012a) 'Institutions for housing supply'. In Smith, Susan J. (ed.) *International Encyclopaedia of Housing and Home*, *Vol. 4*. pp. 99–108.

Needham, B. (2012b) personal communication.

Nelson, A. C. (1986) 'Using land markets to evaluate urban containment programs', *Journal of the American Planning Association*, 52, pp. 156-71.

Nelson, A. C. and Moody, M. (2003*)* 'Paying for prosperity: impact fees and job growth'. Washington: The Brookings Institution. Available at: www.brookings.edu/~/media/research/files/reports/2003/6/metropolitanpolicynelson/nelsonimpactfees

Nelson, A. C. and Moore, T. (1993) Assessing growth management: the case of Portland, Oregon, the world's largest growth boundary, *Land Use Policy*, 10(4), pp. 293–302

Nelson, A. C., Pendall, R., Dawkins, C. J. and Knaap, G. J. (2002) *The Link Between Growth Management and Housing Affordability: The Academic Evidence*. Washington: The Brookings Institution. Available at: www.brookings.edu/es/urban/publications/growthmang.pdf

Newport Partners, LLC and Virginia Polytechnic Institute and State University (2008) *Impact Fees and Housing Affordability: A Guidebook for Practitioners*. Washington: U.S Department of Housing and Urban Development. Available at: http://www.huduser.org/Publications/pdf/impactfees.pdf

Nielsen, C. P. and Jensen, K. B. (2011) *Declining Home Ownership among Young Danish Adults: An Affordability Problem or Just Postponement?* Copenhagen: AKF (Danish Institute of Governmental Research)

Norris, M. (2006) 'Developing, designing and managing mixed tenure estates: implementing planning gain legislation in the Republic of Ireland,' *European Planning Studies*, 14(2): pp. 199–18.

Norris, M. and Shiels, P. (2007) 'Housing affordability in the Republic of Ireland: is planning part of the problem or part of the solution?' *Housing Studies*, 22(1): pp. 45–62.

Olesen, K. (2010) *Danish 'Strategic Spatial Planning' in Transition*. Paper presented at the 24th AESOP Annual Conference, Finland, 7–10 July. Available at: http://vbn.aau.dk/files/43876932/Danish_strategic_spatial_planning_in_transition_Kristian_Olesen.pdf

Oxley, M., Brown, T., Nadin, V., Qu, L. and Tummers, L. (2009) *Review of European Planning Systems*. Fareham: National Housing and Planning Advice Unit. Available at: www.communities.gov.uk/documents/507390/pdf/167298.pdf

Oxley, M. and Haffner, M. (2010) *Housing Taxation and Subsidies: International Comparisons and the Options for Reform*. York: Joseph Rowntree Foundation.

Pendall, R., Martin, J. and Fulton, W. (2002) *Holding the Line: Urban Containment in the United States*. Washington: Brookings Institution. Available at: www.brookings.edu/~/media/research/files/reports/2002/8/metropolitanpolicy%20pendall/pendallfultoncontainment

Pendall, R., Puentes, R. and Martin, J. (2006) *From Traditional to Reformed: A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas*. Washington: Brookings Institution. Available at: www.brookings.edu/~/media/research/files/reports/2006/8/metropolitanpolicy%20pendall/20060802_pendall.pdf

Petitet, S. and Guet, J.-F. (2008) *How to Restrain Urban Sprawl? The French Way*. Paper presented at the 44th ISOCARP Congress. Available at: www.isocarp.net/Data/case_studies/1351.pdf

Pollakowski, H. and Wachter, S. (1990) 'The effects of constraints on housing prices'. *Land Economics* 66 (3), pp. 315–24.

Pollock, G. (2008) *A 'Think Piece' on Lessons from the Australian Planning System for New Zealand* Wellington: Ministry for the Environment. Available at: www.qualityplanning.org.nz/pubs/australian-planning.pdf

Preuß, T. and Ferber, U. (2008) *Circular Land Use Management in Cities and Urban Regions – A Policy Mix Utilizing Existing and Newly Conceived Instruments to Implement an Innovative Strategic and Policy Approach*. Berlin: Deutsches Institut für Urbanistik (German Institute of Urban Affairs).

Priemus, H. (1998) 'Contradictions between Dutch housing policy and spatial planning'. *Tijdscrhiftvoor Economische en Sociale Geografie*, 89(1): pp. 31–43.

Pütz, M., Kruse, S., Casanova, E. and Butterling, M. (2011) *CLISP – Climate Change Adaptation by Spatial Planning in the Alpine Space: Climate Change Fitness of Spatial Planning*. WP 5 Synthesis Report. Zurich: ETC Alpine Space Project CLISP

Renard, V. (2003) 'Les enjeux urbains des prix fonciers et immobiliers'. In Prager, J. C. (ed.) *Villes et Économie*. Paris: La Documentation française, pp. 95-108. Available at: www.ambafrance-cn.org/IMG/pdf/Les_enjeux_urbains_des_prix_fonciers_et_immobiliers.pdf

Renard, V. (2005) 'The practice of land leasehold in France and its relationship with housing development'. In: *A Review on Public Land Leasing System and its Feasibility in Korea*, Seoul, Korea: Housing and Urban Research Institute.

Renard, V. (2006) 'Finances locales et formes du développement urbain'. *Revue d'Économie Financière*, 86(5), pp. 147-56. Available at: http://vincentrenard.eu/index.php?option=com_content&task=view&id=3&Itemid=10

Renard, V. (2009) 'Coût du logement: la question du foncier'. *Informations Sociales* 155 (5/2009): pp. 48–57. Available at: www.cairn.info/revue-informations-sociales-2009-5-page-48.htm

Renard, V. (2010) 'Les urbanistes doivent-ils se préoccuper du développement durable?'. *Les Éditions des Récollets – L'encyclopédie du Développement Durable*, Paris. Available at: www.encyclopedie-dd.org/encyclopedie/territoires/les-urbanistes-doivent-ils-se.html

Richardson, H. W. and Gordon, P. (2001) 'Portland and Los Angeles: beauty and the beast'. Paper presented at the 17th Pacific Regional Science conference, Portland, OR

Rolland, B. (2011) 'Les politiques du logement en France'. *OECD Economics Department Working Papers*, 870. Paris: OECD Publishing. Available at: http://dx.doi.org/10.1787/5kgc42svvr5f-fr

Ronald, R. and Jin, M.-Y. (2010) 'Homeownership in South Korea: examining sector underdevelopment,' *Urban Studies*, 47(11): pp. 2367–88.

Schmidt, S. and Buehler, R. (2007) 'The planning process in the US and Germany: a comparative analysis'. *International Planning Studies*, 12(1): pp. 55–75.

Schwartz, H. L., Ecola, L., Leuschner, K. J. and Kofner, A. (2012) *Is Inclusionary Zoning Inclusionary? A Guide for Practitioners*. Santa Monica: RAND Corporation. Available at: www.rand.org/content/dam/rand/pubs/technical_reports/2012/RAND_TR1231.pdf

Scott, M., Redmond, D. and Russell, P. (2012) 'Active citizenship and local representational politics in twenty-first century Ireland: the role of residents groups within Dublin's planning arena'. *European Planning Studies*, 20(2): pp. 147–70.

Sieverts, T. (2008) 'New tasks for spatial planning in Germany'. In B. Scholl (ed) *Spatial Planning and Development in Switzerland: Observations and Suggestions from the International Group of Experts* (pp. 64–66). Zurich: Swiss Federal Office for Spatial Development.

Statistics Korea (2011) http://kostat.go.kr/portal/english/index.action

Supriatna, A. (2011) 'The feasibility study of land readjustment for Kampung upgrading in Jakarta'. Master's thesis, Faculty of Geo-Information Science and Earth Observation of the University of Twente.

Touati, A. (2012) 'L'habitant maître d'ouvrage gratuit: au cœur de la densification pavillonnaire'. Études foncières, 157 (May–June): pp. 34–39.

US Census (2010) http://www.census.gov/2010census/

Van den Berg, M. (2008) 'Perspective on strategic planning in the Netherlands'. In B. Scholl (ed) *Spatial Planning and Development in Switzerland: Observations and Suggestions from the International Group of Experts* (pp. 72–75). Zurich: Swiss Federal Office for Spatial Development.

Van der Heijden, H. and Boelhouwer, P. (1996) 'The private rental sector in Western Europe: developments since the Second World War and prospects for the future'. *Housing Studies*, 11(1): pp. 13–33.

Van der Valk, A. (2002) 'The Dutch planning experience'. *Landscape and Urban Planning*, 58(2–4): pp. 201–10.

Vanier, M. (2010) 'Acteurs publics, acteurs privés: dans quelles mains sont les villes en France?' *La France – Une géographie urbaine*, Oct 2010: pp. 271–83.

Vermeulen, W. and Rouwendal, J. (2007) 'Housing Supply and Land Use Regulation in the Netherlands'. *Tinbergen Institute Discussion Paper, Ti 2007-058/3*. Available at: http://www.tinbergen.nl/discussionpapers/07058.pdf

Vestergaard, H. (2009) Housing and social cohesion in densely settled Denmark, in A. Holt-Jensen, E. Pollock (eds.) *Urban Sustainability and Governance: New Challenges in Nordic-Baltic Housing Policies*, Chapter 7. New York: Nova Science Publishers, pp. 133–48.

Weber, P. (2010) 'Spatial planning to the test of property rights in Switzerland: an innovative land management approach to coordinate spatial planning goals with property rights interests'. Paper presented at the COBRA 2010, Dauphine Université, Paris, 2–3 September. Available at: www.rics.org/site/download_feed.aspx?fileID=8047&fileExtension=PDF

White, S. M. and Paster, E. L. (2003) 'Creating effective land use regulations through concurrency'. *Natural Resources Journal*, 43: pp. 753–79.

Yates, J. (2011) 'Housing in Australia in the 2000s: on the agenda too late?' Paper presented at the Reserve Bank of Australia's decadal review of the Australian economy, Sydney.

Zonneveld, W. (2007) 'A sea of houses: preserving open space in an urbanised country'. *Journal of Environmental Planning and Management*, 50(5): pp. 657–75.

GLOSSARY

Agglomeration economies arise from the growth of urban areas. These economies include the benefits of a large labour market which employers and employees can access, with a wide range of skills and jobs; a wide range of goods and services; increased competition which can bring down prices; and benefits from networking and sharing ideas.

Buy-to-let mortgages were introduced in the UK in 2000 and have encouraged increased investment in the private rented sector.

Community Infrastructure Levy is a levy on new development introduced by the 2008 Planning Act and implemented through the CIL regulations in 2012. Local authorities can set a levy on all new development that can be used for necessary infrastructure throughout their area. The levy differs from other forms of land value capture such as Section 106 agreements (see below) in that it is fixed in advance and is a prior charge on development. It is thus seen as more transparent than S106 and helps to provide greater certainty for developers.

Duty to cooperate was introduced in section 110 of the Localism Act 2011 to mitigate the abolition of the Regional Strategies and Regional Government Offices that previously had taken a strategic view of planning across local authority boundaries. The duty to cooperate encourages local authorities to consult with adjacent authorities when setting their plans. Further guidance on the duty to cooperate was promised by the government during the Report stage of the Localism Bill in the House of Lords (October 2011).

Elasticity of supply is an economist's measure of the degree to which supply responds to changes in price. It is defined as the percentage change in quantity supplied divided by the percentage change in price over a specified period of time.

Externalities refers to the external consequences of an economic activity such as housing development. External costs include urban sprawl while external benefits can arise out of the regeneration of derelict land, for example. There is a large economics literature on externalities.

Green belts are a means of preventing urban sprawl by designating a swathe of land between the urban boundary and more distant open countryside as protected from further development. Green belt land is not empty countryside as it contains the settlements that predate the designation. However, further growth of these settlements is not permitted.

Land banks comprise both land actually owned by developers with planning permission ('oven-ready land') and land held on options with the landowner. See below.

Land value capture (or recapture) is a way of enabling the wider community to benefit from the uplift in land values created when land is developed or redeveloped (see planning gain). The argument is that the increased value is only possible because of the operation of the planning system in its role of addressing negative externalities, as well as from publicly provided infrastructure (funded in the past from taxes).

Localism Act 2012 introduced a range of new planning policies including Neighbourhood Plans and the New Homes Bonus. It forms the basis for the Coalition government's radical reforms to the planning system.

National Planning Policy Framework sets out the policy framework for new development in England. It replaces some 1,000 pages of planning policy statements with around 50 pages of national guidance.

New Homes Bonus was introduced in the Localism Act as a way of encouraging local planning authorities (and their residents) to embrace the development of new homes. The New Homes Bonus is paid each year for six years. It is based on the amount of extra Council Tax revenue raised for new build homes, conversions and long-term empty homes brought back into use. There is also an extra payment for providing affordable homes.

Options are legal contracts between a landowner and a developer. They give the developer the option to purchase the land at a later date, when planning permission has been given. The contract places a duty on the developer to try to obtain planning permission.

Planning gain refers to the increase in the value of land that arises when planning permission is granted. For example, planning gain is the gap between agricultural land values and values of land with planning permission (or zoned for development in a zoning system). This gap, even in today's difficult market conditions, is huge – for example, the January 2011 Property Market Report from the Valuation Office Agency showed agricultural land at £21,000 per hectare in the South East, whereas a half hectare site with planning permission for housing was £4,000,000.

Section 106 refers to section 106 (S106) of the 1990 Town and Country Planning Act which provides for local authorities to enter into agreements with developers to make contributions that mitigate the adverse impacts of the development. Initially this was limited to directly related impacts such as the need for new road access to the site, but was gradually broadened to include the provision of affordable housing, financial contributions to education and health provision in the local area, open space and other community facilities and more. Because the developer contributions come from the planning gain, it is a form of land value capture. As such it is more successful as a way of contributing to additional affordable housing when the market is booming. In difficult market conditions such as those since 2008, development is much less viable and developers may ask to renegotiate the agreement.

Urban growth boundary (UGB) is a form of constraint on urban sprawl that works by drawing a line around a city within which development will be encouraged while growth outside the boundary will be discouraged. The degree of encouragement/discouragement varies but the most successful UGBs have tended to ensure that adequate infrastructure and service provision including transportation systems are provided within the boundary, whereas no such services are provided outside it (including roads, sewerage, and so on). This has had considerable success where the extent of the UGB is revisited at regular intervals rather than remaining a strict limit for an indefinite period.

Zoning is a form of land-use planning used by local governments in most developed countries. It derives from the practice of designating permitted uses of land based on mapped zones which separate one set of land uses from another. Zoning may regulate the uses to which land may be put, or it may regulate building height, lot coverage, and similar characteristics, or some combination of these. Unlike land-use planning in England, zoning systems are legally binding once they have been established. However, there are usually rules to enable changes to be made, such as revisiting the zoning system at regular intervals or re-zoning as the urban area grows.

ACKNOWLEDGEMENTS

The research team would like to thank all the country experts for their vital contributions to this research. We would also like to thank the stakeholders who participated in the roundtable discussion.

ABOUT THE AUTHORS

Professor Christine Whitehead is the former Director of the Cambridge Centre for Housing and Planning Research, now a Departmental Fellow at Land Economy.

Sarah Monk is Deputy Director of the Centre. She has a track record of research into the delivery of affordable housing through the planning system and has written widely on problems of land supply.

Dr Gemma Burgess is a Senior Research Associate who has worked on the delivery of affordable housing through the planning system and on intermediate housing.

Dr Connie Tang is a Research Associate at the Centre. She has recently been working on a comparative review of affordable housing delivery and funding in Asian countries.

The Joseph Rowntree Foundation has supported this project as part of its programme of research and innovative development projects, which it hopes will be of value to policy makers, practitioners and service users. The facts presented and views expressed in this report are, however, those of the author[s] and not necessarily those of JRF.

A pdf version of this publication is available from the JRF website (www.jrf.org.uk). Further copies of this report, or any other JRF publication, can be obtained from the JRF website (www.jrf.org.uk/publications) or by emailing publications@jrf.org.uk

A CIP catalogue record for this report is available from the British Library.

First published 2013 by the Joseph Rowntree Foundation
ISBN: 978 1 85935 969 3 (pdf)
Typeset by The Policy Press

Joseph Rowntree Foundation
The Homestead
40 Water End
York YO30 6WP
www.jrf.org.uk