

# Build up

“green  
alliance...”

The environmental  
case for new homes in  
sustainable locations



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## **Authors**

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## **Green Alliance**

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# Contents

Introduction	2
Density matters	4
New housing is not built in accessible locations	9
Why we build where we do	10
Planning uncertainty can worsen environmental outcomes	15
Streamlining planning in preferable locations	22
New building in urban areas	24
Conclusion	29
Endnotes	30

# Introduction

“

**England has some of the most unaffordable homes in the developed world”**

For decades, England has failed to build enough homes for its growing and ageing population. Chronic undersupply has contributed to the country having some of the most unaffordable homes in the developed world, which has been a drag on productivity and causes a political headache for any party wishing to win over younger voters.

As incomes rise and the population grows, demand for housing space increases. The housing market has not responded to this and the number of dwellings per person has fallen steadily. England has low levels of vacancy relative to other OECD countries with only 0.9 per cent of homes vacant for more than six months.<sup>1</sup>

Increased competition for space has helped to drive house prices up relative to incomes, with the average home now costing 9.1 times the level of average earnings, up from 3.5 times in 1997.<sup>2</sup> Low interest rates and government policies that stoke demand have contributed, but they do not wholly explain the rise in prices.<sup>3</sup>

Rental prices, which are less affected by interest rates, have not changed dramatically as a proportion of income but the amount of space occupied by each private renter has fallen from 34.1 square metres in 1996 to 28.6 square metres in 2018.<sup>4</sup> In other words, renters are unable to spend any more of their income on rent and, therefore, they have to rent less space.

“

**The planning system is failing to shape a built environment fit for net zero and nature restoration.”**

High housing costs limit people's life choices. They are less able to move to find well paid jobs, have less disposable income and young people are unable to move out of their parents' homes, delaying independent adulthood. Twenty eight per cent of people aged between 20 and 34 now live at home with their parents, up from 24 per cent a decade ago.

Both the Conservatives and Labour have committed to building 300,000 new homes a year. Where these are built is of critical importance to the environment, but the planning system is failing to shape a built environment fit for net zero and nature restoration, creating communities that have no choice but to rely on a private car and leading to sprawl on previously greenfield land. Those who live in isolated new developments are also less able to access jobs, education and amenities, affecting their wellbeing as well as the health of the economy. In its sixth assessment report, the Intergovernmental Panel on Climate Change identified compact cities as an important way to mitigate climate change.

Grappling with planning policy is not for the faint hearted but building more homes in environmentally preferable places is socially, economically and ecologically necessary.

## Density matters

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**Even Britain's biggest cities maintain low density urban forms.”**

England is often thought of as a densely populated country; across the whole country population density is 277 people per square kilometre of land area.<sup>5</sup> Yet a national picture hides significant variation. Spain has a national population density of 95 people per square kilometre but concentrates its population in urban areas much more efficiently. Many parts of Barcelona are above 50,000 people per square kilometre, compared to London where the highest density per square kilometre, in Maida Vale, barely reaches 20,000.<sup>6</sup>

Beyond London, densities fall more sharply and this shapes the way people travel. In Britain's large cities only 40 per cent of residents can reach the city centre by public transport within 30 minutes. In equivalent European cities, 67 per cent can.<sup>7</sup> This is not due to the size of public transport networks. In many comparable European cities they cover a similar area or even smaller than British cities. The difference is density. Fewer people in British cities live near to public transport because housing is predominantly low rise, unlike the midrise form more common in Europe. This can be seen in the illustration opposite, showing the population densities of Manchester and Milan, within the area that people can travel to the centre in 30 minutes.

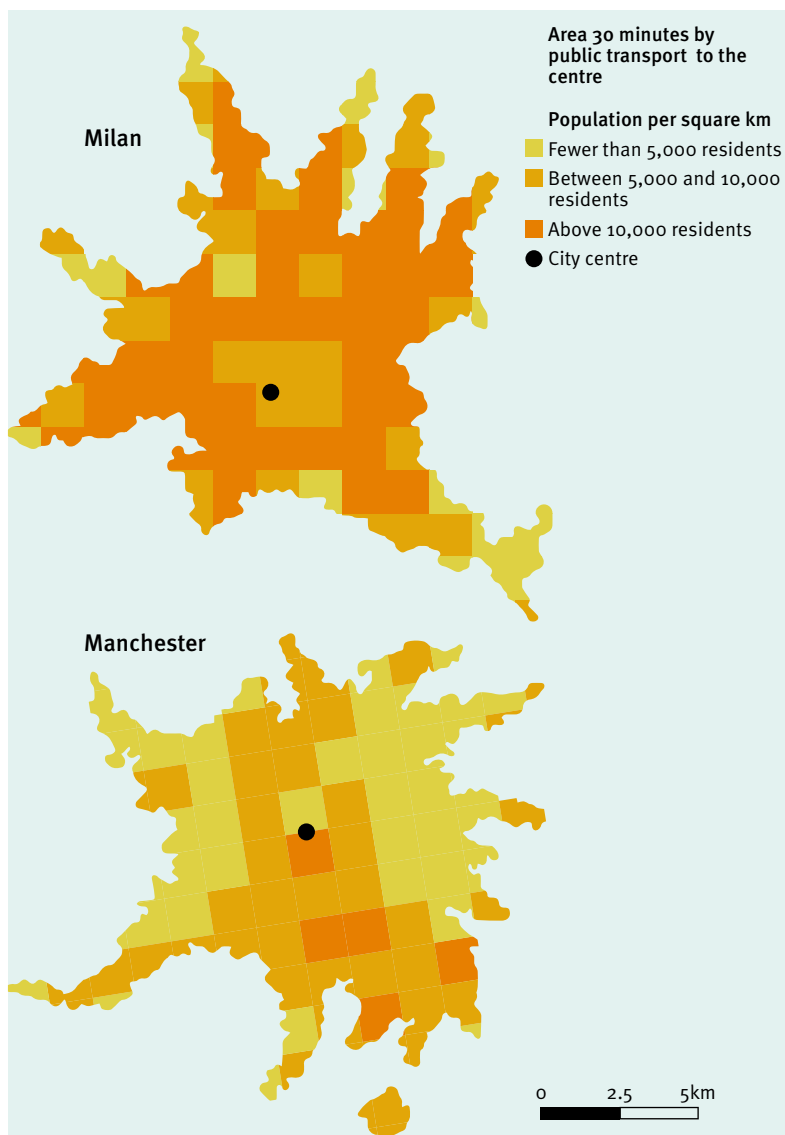
For public transport to be a preferable choice, services need to be frequent and affordable. Without large enough populations living near public transport, services struggle to be viable. As European cities grow bigger they become denser, allowing public transport to scale up, but even Britain's biggest cities maintain low density urban forms. Historic urban cores, built before the advent of the private car, are fairly dense as people needed to live within walking distance of employment. But the increase in car ownership has enabled the growth of suburbs, as much longer distances are possible on a daily basis. As the population

has grown this has inevitably led to congested roads and means British workers have some of the longest commutes in Europe.<sup>8</sup>

Low density development also makes active travel much less viable. People are unable to live within a reasonable walking or cycling distance to jobs, shops or green spaces and they must contend with the higher volumes of car traffic which accompany low density living.

**“  
British workers  
have some of the  
longest commutes  
in Europe.”**

Milan’s ‘30 minute’ area has a higher residential population than similar sized Manchester<sup>9</sup>





**“  
As density  
increases, there  
are lower  
emissions from  
domestic energy  
consumption.”**

## **Dense, walkable urban areas are good for the environment**

The car dependent lifestyles created through the layout of Britain's built environment have a tangible impact on carbon emissions. Average emissions from transport in the UK are significantly lower for those living in urban environments at 1.4 tonnes a year in comparison to 2.5 tonnes per year for those living outside cities.<sup>10</sup> Nearly 30 per cent of people travel to work by car in the least densely populated areas of the UK.<sup>11</sup> This compares to only three per cent in the most densely populated areas.<sup>12</sup>

Evidence of the environmental impact of dense urban areas is not specific to British cities.. Atlanta and Barcelona are often compared. Barcelona's high population density means its public transport network can be more effective. Atlanta's sprawling urban form means that carbon emissions per capita are far higher.<sup>13</sup> A study of Toronto's built environment found the neighbourhood with the lowest emissions had predominantly high density apartments within close distance to public transport.<sup>14</sup> On the other hand, neighbourhoods with the highest emissions had mostly low density suburban homes.

As density increases, there are lower emissions from domestic energy consumption. Flats become more commonplace, instead of the detached or semi-detached houses typical of the urban fringe. Annual carbon emissions from a detached house are almost three times higher than that of a purpose built flat and the shared walls in flats reduces heat loss.<sup>15</sup>

## **Density can mean diversity**

Higher density developments can have a diversity of appearances and do not necessarily mean high rise. Some tall blocks set in large areas of open space may not even be as dense as traditional terraced streets. Older UK developments built at higher densities are often seen as desirable today. These include the tenement buildings common to Glasgow and Edinburgh, typically three or four storeys high, big enough for families and with shared gardens for residents. Apartment blocks are more common



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**Paris and Barcelona  
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examples of  
successful higher  
density living.”**

on the continent, and cities such as Paris and Barcelona provide historic examples of successful higher density living. Buildings do not typically rise above five or six storeys and achieve high densities while maintaining pleasant living environments. One advantage older buildings have is that they were constructed before private car use was assumed, which has led to large parts of modern residential developments being given over to surface car parks.



In some instances, high rise buildings will have a role to play in increasing density, particularly in sites very close to city centres or where expensive sites are not economically viable without significant numbers of dwellings at height.



Many locations preferable for housebuilding are in low rise, suburban neighbourhoods served by a train station. Increasing the density is likely to mean changing the character of some of these suburbs. But the character of cities and towns should naturally evolve as the needs of the population change.

“

**The housing crisis limits labour mobility, meaning people cannot move to access well paid jobs.”**

Despite the evident need for urban densification, proposed revisions to the National Planning Policy Framework (NPPF) aim to provide more protection for the existing character of neighbourhoods. The NPPF is the overarching document setting out the government’s planning policies and how they should be applied. Where the framework requires plans to provide for housing need and other uses, an exemption is proposed where “meeting need in full would mean building at densities significantly out of character with the existing area”.<sup>16</sup>

The housing crisis constrains economic performance and limits labour mobility, meaning people cannot move to access well paid jobs. Employers are unable to access the range of skills they need to grow their businesses. This prevents the agglomeration advantages of bringing employees and businesses closer together. Workers spend time commuting which would be better spent working or enjoying leisure activities.

An extraordinary amount of money is tied up in housing; the amount rose from £1.6 trillion in 1995 to £8.1 trillion in 2020. Ever rising house prices encourage people to invest money in property, rather than in more productive activities. This applies to lenders too, decreasing their appetite for commercial lending.<sup>17</sup>

# New housing is not built in accessible locations

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**Only 17 per cent of new homes built between 2011 and 2019 were in a well connected neighbourhood.”**

Homes in well connected locations command a price premium as, on the whole, people prefer to live where they can easily access jobs, leisure activities and services. As these locations are environmentally and economically preferable it might be expected that this is where new homes would be built. Yet only 17 per cent of new homes built between 2011 and 2019 were in a well connected neighbourhood, within a ten minute walk of a train station.<sup>18</sup>

There is regional variation in the public transport accessibility of new homes. In many places, like Bristol, Newcastle and Nottingham, there were fewer new homes built within walking distance of stations compared to the existing housing stock.<sup>19</sup>

Development near stations is generally concentrated in only a small number of neighbourhoods. Of all neighbourhoods within ten minutes' walking distance from a station, nearly half have built fewer than one new house a year.<sup>20</sup> Fifty eight per cent of new well connected housing is found in only eight per cent of the most well connected neighbourhoods. Unlocking more development in the suburban areas around train stations would vastly increase potential for the supply of land for new housing.

Density of development affects how people can travel to meet their daily needs. Analysis of planning permissions granted between 2015 and 2019 shows the number of residential sites located within a 15 minute journey to a large employment centre. In the North East, South East and East of England there were no approvals for large residential sites within a 15 minute journey to an employment centre by public transport. In the South East, 31 per cent of large development approvals were located over an hour away from employment centres by public transport.<sup>21</sup>

# Why we build where we do

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**Dealing with the effects of drought, flooding and extreme heat will require spatial planning and infrastructure investment.”**

England’s planning system has a curious void where its spatial direction should be.

National priorities, such as carbon budgets or housing targets, are agreed with a national democratic mandate, but there is little to link them to local planning decisions. In fact, the two can collide.

Most countries bridge the divide between local and regional or national priorities with some form of strategic spatial planning that joins transport with development and specifies where growth or regeneration should take place. This allows co-ordination between decisions on interlinking priorities, such as transport, housing, grid infrastructure and water resources. It can enable a vision for an area to be translated into policies and land allocations, while creating a framework for private investment. This is increasingly important for climate change adaptation, as dealing with the effects of drought, flooding and extreme heat will require spatial planning and infrastructure investment.

Prior to 2011, each region of England was required to have a Regional Spatial Strategy (RSS), a statutory legal document that informed local development frameworks. RSSs covered a period of 20 years, allowing decisions to be made on issues requiring longer time horizons.

In 2010, RSSs were scrapped, declared as an anti-democratic failure by the then secretary of state as he heralded a return to localism. Instead, local planning authorities are bound by a ‘duty to co-operate’, a legal requirement to engage with other relevant authorities on strategic planning matters. Local plans are assessed by the Planning Inspectorate for evidence of co-operation, though this is more a matter of process than outcome.

**“  
The average  
amount invested  
by local authorities  
in planning fell by  
42 per cent  
between 2009-10  
and 2017-18.”**

Local plans focus on five year land supply for housing, far shorter than the 20 year time horizon of RSSs. The duty to co-operate is widely recognised as insufficient in enabling join up between adjacent councils and planning for contentious issues.

County councils surveyed in 2021 were unanimous in the view that better cross boundary strategic planning with county involvement would lead to better outcomes from the planning system. Asked their opinion about 2020's planning white paper, 96 per cent were concerned by the lack of proposals around strategic planning.<sup>22</sup>

Strategic planning would also help to bring together different levels of government on interdependent matters. England's messy local governance arrangements mean transport planning is often done by a different body, on a different scale and timeline to plans for housing. For example, Devon is a two tier authority where Devon County Council holds transport powers whereas housing and planning are the responsibility of lower tier authorities, such as Exeter City Council. This leads to misalignment between transport and housing strategies.

Compounding the problem is funding. The average amount invested by local authorities in planning fell by 42 per cent between 2009-10 and 2017-18 in real terms.<sup>23</sup> This reduces their ability to invest in long term placemaking. Funding for transport also poses an issue. It is now provided through competitive bidding to central government on short term cycles. Councils must deliver whichever projects receive funding, rather than those which make cohesive sense, limiting their ability to provide long term certainty.<sup>24</sup>

**“  
Wales and  
Scotland have  
spatial strategies  
to provide longer  
term visions.”**

### **Devolved administration approaches**

Rising house prices and the need to build in more sustainable places are not exclusive to England, yet planning policy across the UK has diverged significantly. Both Wales and Scotland have spatial strategies to provide longer term visions on areas of focus for economic development and infrastructure.

The Planning (Scotland) Act 2019 introduced the requirement for planning authorities, or those working together, to put forward regional spatial strategies that outline how the priorities for a given region will be achieved.<sup>25</sup> Through the fourth National Planning Framework (NPF4), the Scottish government set a national spatial strategy up to 2045.<sup>26</sup> NPF4 is intended to align with other important documents and strategies, including Scotland’s second National Transport Strategy and National Strategy for Economic Transformation. In comparison, the National Planning Policy Framework makes no reference to the government’s transport decarbonisation plan and there is a lack of a joined up approach to co-ordinate national priorities.

Similarly, the Welsh government’s National Development Framework has a spatial strategy to 2040.<sup>27</sup> It mandates that local planning authorities must work together to develop one spatial development plan for each Welsh region, setting out plans for housing and infrastructure provision.

Yet spatial strategies alone are not sufficient. There remains a question of how Scotland’s NPF4 will be resourced, with the Royal Town Planning Institute estimating that it introduced 49 unfunded duties to local authorities and could cost up to £59.1 million over ten years.<sup>28</sup> While density is highlighted in both Scotland and Wales as vital to reducing emissions, this has not been backed up by any formal measures to increase density, and it is unclear how it will be achieved.

In England, London is the exception, where decisions on transport, housing and growth are still well integrated in the Greater London Authority. The mayor produces the Mayor’s Transport Strategy, an Economic Development Strategy and the London Plan, a spatial development strategy for Greater London. This enables co-ordination on planning for transport and housing and results in greater coherence between the two. Housing need is calculated for London as a whole and its distribution within the capital is at the discretion of the mayor. In London, 70 per cent of new

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**The easiest, least risky and cheapest sites for developers tend to be greenfield land on the urban fringe.”**

homes are built within a ten minute walk of a railway station.<sup>29</sup>

In the rest of the country, land is not allocated for housing in such a strategic way. The Department for Levelling Up, Housing and Communities formulates an assessment of housing need based on population projections and local affordability. A 35 per cent uplift is applied to local authorities in the top 20 cities and urban centres, reflecting an ambition to concentrate housing growth in urban areas.

Local authorities then decide which land to allocate for development in their local plan. The system is opportunistic and market led, beginning with a ‘call for sites’, in which landowners, developers and others can promote areas of land which could potentially be developed.

Although demand is high in accessible locations, the easiest, least risky and cheapest sites for developers tend to be greenfield land on the urban fringe, where large parcels of land can be purchased from a single owner, with no existing uses to complicate the process. A typical housing estate on the edge of a town might achieve 15-20 dwellings per hectare, far below the 40-60 dwellings per hectare at which active travel and thriving commerce become viable. England’s ‘plan led’ system has spawned a new industry of speculative land promoters who work with landowners to promote their (typically greenfield) land for allocation.

Much of the best land from an environmental perspective, near to transport links and jobs, is already developed. Small sites do come up through natural attrition but, although demand for homes in these locations is high, construction is currently not being directed to the most well connected locations.

### **Policy recommendation**

#### **Strategic spatial plans for England**

Long term strategic spatial plans should be established to cover the housing, transport, power and other infrastructure needs in every area of England, with climate change mitigation and adaptation at their heart. The area they cover should be flexible to reflect different governance arrangements and functional boundaries. For instance,



**“  
Strategic planning  
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identify areas with  
good potential for  
intensification.”**

mayoral combined authorities would make a natural starting point for city regions. Other local authorities may have historic relationships or geographic links that form a reasonable sized area for ‘larger than local’ issues. Local planning authorities should be given six months to determine their own strategic planning relationships first before being put into an area by national government.

New strategic planning bodies of elected councillors should be formed with a statutory duty to create a spatial framework for their member local authorities. In some cases, this may be best achieved within an existing governance structure, like mayoral combined authorities.

Spatial plans should be vision led, align investment and growth priorities and contain policies on issues that include, but are not restricted to, strategic growth areas, transport planning and decarbonisation, clean energy infrastructure, water resources, climate change adaptation and local nature recovery. Strategic planning bodies should bring together those bodies with responsibility for relevant plans, such as on regional transport, and be mandated to identify areas with good potential for intensification, where existing transport nodes exist and where land is currently underutilised.

# Planning uncertainty can worsen environmental outcomes

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**Granting permission for development can become highly politicised.”**

The English planning system is unusual in how unpredictable it is. Most developed countries have a ‘rules-based’ system, where local planning regulations outline what can be built where and developers only need to seek administrative approval before they can build, as long as their design conforms with regulations.

The UK is an exception. Since the Town and Country Planning Act (1947) all developments must first acquire planning permission from a local planning authority. Decisions are made in respect of a local plan, which should set a framework for where development should go in an area. However, a proposal can be rejected, even if it satisfies the requirements of the plan.

The decision maker is usually a local planning officer, but larger or more contentious sites are decided by planning committees made up of local councillors. The right of appeal means decisions can be escalated to planning inspectors or even the secretary of state. This means granting permission for development can and does become highly politicised. It can be expedient for a planning committee to refuse permission, knowing that it will be granted upon appeal. This adds delay and can result in the award of appeal costs borne by the taxpayer but maintains political cover for those tasked with permitting development.

From the developer’s perspective, this system is much riskier as it can be difficult to predict what will receive planning permission; much is at the discretion of planning officers or councillors. It is particularly risky for smaller developers whose business model relies on them being able to build and sell as quickly as possible, as much of their capital is tied up in projects. Developers build risk into their financial models, typically adding 15-20 per cent to their required returns to cover planning and land risks.<sup>30</sup>

“

**69 per cent of people have never engaged with a local plan consultation.”**

### Planning blocks: Cockfosters tube station

Transport for London (TfL) is one of London’s largest landowners and is developing a programme of homebuilding to diversify its income and provide more stable sources of funding. Its portfolio includes some of the most desirable land, located directly above and around stations with fast access to central London. From an environmental perspective, these locations can often be the first choice for new homes.

Despite warm words in the NPPF regarding density, local pressure can prevent the development of suitable sites. For instance, Enfield Council’s planning committee approved plans to replace a car park at Cockfosters underground station with 351 homes, noting local and national policies on prioritising underutilised brownfield land and encouraging reductions in car travel. Following a petition and intervention by a neighbouring constituency’s MP, the plan was blocked by the then secretary of state for transport over concerns about a loss of car parking spaces. This is despite the London Plan, adopted after detailed and lengthy consultation, containing specific policies encouraging the redevelopment of car parks for housing.

New developments have many perceived costs to residents through disruption, poorer local services or loss of amenity. The benefits mostly accrue to people who would be housed there if the development were built (as well as to developers and landowners). In this way, costs are highly localised and benefits are dispersed among people who are not yet local voters and do not have a say in the consent process. The system is heavily weighted towards the interests of existing residents who have little incentive to consent to new buildings.

Those who participate in the planning system tend to be those with the time and means to do so, with young people and those on lower incomes less likely to participate. According to a YouGov poll in 2020, 69 per cent of people have never engaged with a local plan consultation, increasing to 80 per cent for those aged between 18 and 24.<sup>31</sup> During the coronavirus pandemic, there was a move to online engagement, which is a step towards making the planning process more accessible. A survey by the Royal Town Planning Institute showed that almost half of respondents were more likely to participate if they were given the option to do so online as well as in person.<sup>32</sup>

**“  
The planning  
system has become  
a mechanism for  
development  
control rather than  
placemaking.”**

Sites in existing built up areas have more neighbours than sites on the edge of a settlement and, especially if the neighbours are homeowners, this means more objections. Analysis of planning decisions across 394 local authorities shows that a ten percentage point higher home ownership rate is associated with 1.2 percentage point lower growth in dwellings.<sup>33</sup> Local authorities with high amounts of developable land also experience more construction and these tend to be rural villages or small towns surrounded by countryside.

Increasing density necessarily means building in places that are already occupied. As the planning system is highly sensitive to building in these locations, it is easier to gain planning permission where there are fewer neighbours and where there are no privacy or heritage constraints. Combined with a lack of spatial strategy, this leads to development being pushed into areas where it is least difficult, rather than where people would prefer to live or where it would be environmentally preferable.

A discretionary planning system can improve the quality of development and give it democratic legitimacy. It can also facilitate development at significant scale. But the decline of public house building, the dominance of a few big, private sector house builders, the state's reluctance to control land values and the end of new town corporations have all contributed to the under supply of housing over the past 40 years. In that time, the planning system has become a mechanism for development control rather than placemaking and new development. It has not been muscular enough to direct growth to the right locations. Rather, it has let it happen where objections are fewest.

### **National planning policy is too weak**

The NPPF sets the scene for development, providing a set of policies covering economic, social and environmental aspects which must be considered when local plans are written. Alongside policies in the local plan, the NPPF is a material consideration in deciding planning applications.

It contains warm words about the importance of avoiding low densities where demand for homes is high, even requiring minimum density standards for city and town

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Interpretation of  
national policy  
on density varies  
substantially  
between local  
plans.”**

centres well served by public transport, though it is vague on what that density standard should be. The NPPF is clear that applications that fail to make efficient use of land should be refused, but judgement on what ‘efficient use’ means is again left to the local planning authority.

Interpretation of national policy on density varies substantially between local plans. For example, Coventry’s local plan sets a minimum density standard of only 35 dwellings per hectare on all land aside from a single square kilometre in its centre, despite having many suburban railway stations with links into central Coventry, Birmingham and beyond.<sup>34</sup>

**Is car parking blocking housing?**

It is not uncommon in the UK for new housing to be rejected on the grounds that it does not provide sufficient parking spaces. There are no national policies to prevent this, even where densities make car ownership less necessary, and decisions around parking requirements are at the discretion of local councils. This can be exemplified by a development that was rejected for planning permission in late 2022 in Manchester, owing to a projected increase in traffic and a lack of car parking space for new residents.<sup>35</sup> The planning permission included a car club bay next to the site and two years’ free membership for residents, and the development was located next to a bus stop. This demonstrates the weight given to parking and vehicle ownership over other modes of transport.

Bournemouth, Christchurch and Poole Council has taken steps to address this. In 2021 it produced a Supplementary Planning Document (SPD) which recognised the need to encourage sustainable forms of travel.<sup>36</sup> The council introduced a zoning system on parking requirements, with zones near town centres no longer requiring any parking. The SPD recognised that car parking occupies valuable space which could be used for housing, and that parking restraint is an important lever that councils can use to encourage modal shift. The council’s transport planners say this is already leading to increased numbers of dwellings in transport accessible locations.

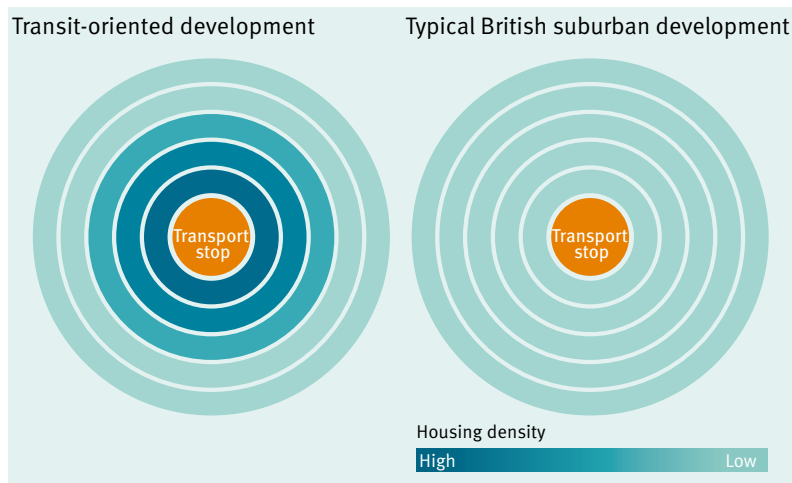
Approaches in other countries (and in England from 1992-2006) apply much more explicit planning policies to maximise the use of accessible land and create compact urban environments. This is sometimes called ‘transit-oriented development’ and generally designates

areas within 800 metres (or ten minutes' walk) of a public transport stop for higher density, mixed use development, with lower density housing further away from the hub.

### British suburbia is not densely built

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The Stockholm loop aims to build 120,000 houses close to 12 public transport stops in the city's suburbs.”



The Hammarby Sjöstad neighbourhood in southern Stockholm is an example where transit-oriented development has been central to turning a former run down industrial area into an environmentally sustainable neighbourhood. Dense residential development situated along public transport corridors has encouraged people to leave their cars at home. This creates the conditions for over half of all trips to be by public transport. Resultant emissions from trips taken by cars were over 50 per cent lower per apartment when compared to surrounding neighbourhoods.<sup>37</sup> Stockholm is moving forward with this approach on a broader scale with the Stockholm loop, an initiative which aims to build 120,000 houses close to 12 public transport stops in the city's suburbs.<sup>38</sup>

Other examples include the urban district of Vauban in Freiburg, Germany. All households are within 400 metres of a tram stop, and brownfield sites have been used to build 2,000 homes. As a result, 40 per cent of households in these areas do not own a car.<sup>39</sup>

These examples show how to prioritise land near public transport stops for high density developments in urban areas, enabling the building of more homes and cutting car dependency.

“

**New Zealand’s national reforms have allowed more homes to be built in sustainable locations.”**

### **New Zealand’s building density reforms**

New Zealand’s built environment has been characterised by detached homes, with high rise developments only permitted within limited urban centres. The planning system meant any development with more than a single house on a site could be rejected by the local council. This limited the supply of new housing, contributing to a 130 per cent increase in house prices between 2011 and 2021.<sup>40</sup>

To increase the number of new homes, New Zealand brought forward a series of reforms, beginning with the National Policy Statement on Urban Development. This required major cities to allow six storey residential buildings on sites within walking distance of public transport and it scrapped councils’ ability to reject housing developments based on car parking levels.<sup>41</sup> The Medium Density Residential Standards (MDRS) followed, which required councils to allow developments of up to three dwellings of up to three storeys on a site, without requiring a resource permit.<sup>42</sup>

The MDRS is applicable to all existing residential localities in the greater urban areas of the most populous cities. To increase housing supply as quickly as possible, the minister for the environment has final say on disagreements resulting from the process of following a local council’s plan.<sup>43</sup>

These national measures built on the previous success of the Auckland Unitary Plan, which aimed to stimulate densification in the country’s largest city. It is estimated that Auckland’s reforms resulted in consent for over 19,000 additional dwellings and much of this increase came from multi-unit buildings within the city’s inner suburban areas.

New Zealand’s national reforms have allowed more homes to be built in sustainable locations, and there have already been tangible impacts on housing supply since they were brought forward in 2021, with new housing overall up 24 per cent and the number of multi-unit residential buildings up 40 per cent between 2021 and 2022.<sup>44</sup>



## Policy recommendation

### Strengthen the NPPF on transit-oriented development

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**Seeking to preserve the character of all suburbs in a rigid way can have detrimental impact.”**

The NPPF should be much more explicit about the sustainability gains from co-locating people and the services they use, whether retail, employment, education or leisure.

It should acknowledge the need for neighbourhoods to develop and change as a mitigation strategy for climate change. Many areas have important heritage value, but seeking to preserve the character of all suburbs in a rigid way can have detrimental impacts both on their liveability and on the location of new development.

Language in the NPPF on density should be much more closely linked to transport accessibility, defining areas within 800 metres, or ten minutes' walk, of a transport stop as priority locations for enhanced density. This should be accompanied by prioritising funding for public transport to improve access and service reliability, making it a more attractive travel option. In some cases, increased density is needed to make frequent transport services viable, and this should be considered.

# Streamlining planning in preferable locations

Increasingly, the English planning system has included caveats intended to streamline the development process by introducing circumstances in which planning permission is not required.

Some kinds of development are now allowed without prior planning permission, within limitations and providing they meet conditions. These permitted development rights apply to changes such as small extensions and the installation of skylights, windows or doors. Since 2013, conversions from commercial to residential use have also been granted permitted development rights, resulting in 64,800 new homes. However, these have been controversial and, compared to dwellings that received planning permission, they are more likely to be in primarily commercial areas like business parks, with very poor residential amenities.<sup>45</sup>

Local development orders (LDOs) provide automatic planning permission for certain types of development in defined locations. Local planning authorities set out requirements, for instance on the number of storeys permitted, design guidelines or types of building use, and planning permission is granted if developments meet their conditions.

Planners are encouraged to use LDOs as a proactive tool to guide development where they would like it, rather than waiting for the market to initiate a proposal. They have mostly been used for commercial developments, such as business parks, but are increasingly popular for residential schemes. At the end of 2017, 20 per cent of LDOs included new build residential schemes, mixed use development and smaller scale householder developments such as extensions.<sup>46</sup>

“

**Local Development Orders could be used to derisk the planning process, especially for small builders.”**

LDOs could be used to develop high quality housing in sustainable locations. This would derisk the planning process, especially for SME builders, who are less able to absorb risks associated with the discretionary planning system and allow planners to direct development to the right locations.

However, if this path is taken, it is crucial that it is democratically agreed by local authorities, following public consultation, and that developments conform with high quality design and environmental standards.

#### **Policy recommendation**

##### **Consider LDOs for underutilised suburban land**

Local planning authorities should identify underutilised suburban land close to public transport stops, particularly close to railway stations. They should consult appropriately with all the relevant stakeholders and consider implementing LDOs, to improve housing quality, increase density and concentrate new housing in those places already served well by public transport or with the potential to be well served.

# New building in urban areas

“

Previously developed sites are a top policy target.”

## Infilling within existing urban areas

Infill refers to construction within the existing built environment. This can happen on previously developed vacant land, underused land or land currently used for another purpose such as a car park.

Previously developed sites are a top policy target. They are usually within existing towns and cities, close to infrastructure and may be derelict eyesores. Many are former industrial sites and can be costly to prepare because contaminated land needs remediation before it can be used for residential purposes. This is sometimes grant funded by central government, for instance through competitive bidding to the Brownfield Release Fund.

The availability of vacant brownfield sites varies significantly across the country and much of the most easily developed land is in areas where housing demand is low. Where land pressures are high, the easy to develop sites have sometimes already been built on, though it is important to note that brownfield land is a stream, not a reservoir.<sup>47</sup>

Developing brownfield land should be a policy priority, but it alone will not provide all the land needed to alleviate chronic housing shortages in England. It will be necessary to look at other types of land, especially in areas of high housing demand. Although we focus on urban land, a careful, democratic and strategic review of green belt land may be necessary to meet housing need.

## Replacing existing buildings

More coherent placemaking is difficult in existing urban areas because land ownership is highly fragmented. A developer wishing to create a row of new, four storey

**“Land assembly is one of the greatest challenges to increasing housing provision in urban areas.”**

town houses may need to negotiate with 20 or 30 different landowners to assemble enough land for the project. The owner of the last parcel of land to be bought holds extraordinary power to negotiate an exceptional price knowing that, without their sale, the whole project may fail. Land assembly is one of the greatest challenges to increasing housing provision in urban areas.

Public bodies can exercise compulsory purchase powers to buy land, if it is justified in the public interest. However, the value of the land is not related to the value for its current use but its ‘hope value’. This is based on the prospect that land could receive planning permission for development in future, even if it currently has none. This makes areas of land in urban areas more expensive to buy and assemble, reducing project viability.

In densifying urban centres, adhering to circular economy principles is critical. Long lasting buildings should be a priority, whilst reducing the embodied carbon from construction. Buildings must be able to be repurposed and their use changed over time, if required, to lengthen their lifespan. Lower resource use from construction can come from optimising material use at the design stage and reusing materials from demolition. Our recent analysis shows that, through circular measures, the UK could reduce raw materials use in construction by 35 per cent by 2035.<sup>48</sup>

Modular construction has potential to improve material efficiency. It involves manufacturing sections of buildings in a factory before transporting them to a site for assembly. In some cases, modular housing can reduce embodied carbon by up to 45 per cent.<sup>49</sup> It can also help to construct homes quickly, with projects delivered 20-60 per cent faster than traditional construction methods.<sup>50</sup> Also, by reducing the time taken to finish a project and by undertaking a large proportion of the work off-site, modular construction can reduce local disruption.

Therefore, demolition may sometimes be the better environmental option in terms of carbon emissions, and, when optimising land use, leaves more space for nature and reduces urban sprawl.

## When demolition is right for the environment

“

**There are good environmental reasons to consider demolition in certain cases.”**

The production of construction materials is a major driver of carbon emissions and biodiversity loss, so avoiding unnecessary waste should be paramount. Despite this, there are good environmental reasons to consider demolition in certain cases.

The opportunity cost of England’s low density urban form is vast. Unless urban centres and transport hubs are remodelled, any significant volume of new homes must inevitably extend existing urban areas or be in entirely new settlements. And, as we have discussed, currently these places are where the planning system is most likely to direct them to.

To demonstrate the impacts of decisions around where to build, we imagine two scenarios in which 250 homes are added to an urban area.

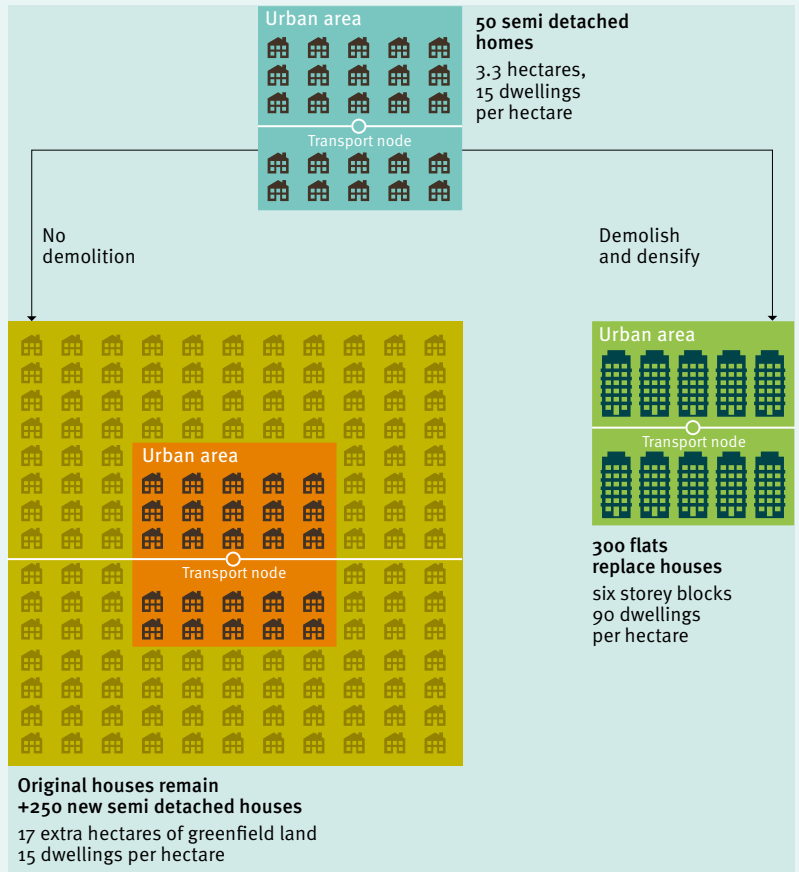
In the first, ‘demolish and densify’ scenario, 50 existing semi-detached homes are demolished and replaced with 300 flats.

In the second ‘no demolition’ scenario, the same 250 homes are instead built on the urban fringe at a density of 15 dwellings per hectare.

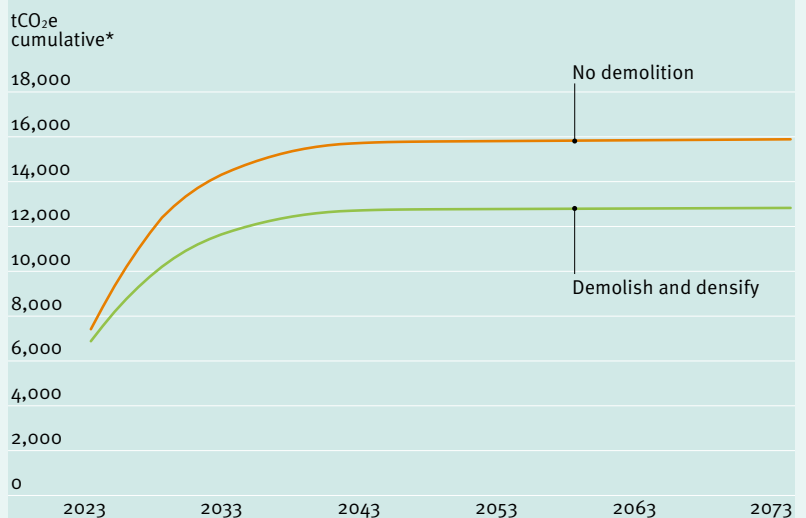
The first scenario results in no additional land take, providing 90 dwellings per hectare. The second scenario results in 17 additional hectares of greenfield land used for housing.

We have calculated the subsequent impact on carbon emissions of each scenario by modelling the embodied carbon expended in constructing the new semi-detached homes or flats, their heat requirements and the emissions from residents’ car use. After 60 years, the ‘no demolition’ scenario results in 3,062 tonnes of extra carbon emitted to the atmosphere, compared to ‘demolish and densify’. The main effect causing this is the car dependency of the households on the urban fringe. This is the case even though we have assumed the switch to electric vehicles over the period into the early 2030s, in line with the Climate Change Committee’s (CCC’s) balanced net zero pathway. We also assume a change to electrified heating from 2030 and decarbonisation of power generation, in line with the CCC’s projections.

## Two ways of building 250 new homes<sup>51</sup>



## Projected greenhouse gas emissions are lower for ‘demolish and densify’



\*Cumulative emissions include emissions from heating, travel and construction



“

**‘Street votes’ could be another means to agree on the redevelopment of existing areas.”**

## Policy recommendations

### Strengthen powers to regenerate and redevelop

Using compulsory purchase orders is a way for local authorities to support regeneration schemes, although it is a complex process. It is critical that this is streamlined and made more efficient, supported by strategic plans to show where compulsory purchase is necessary.

The ‘compensation code’ should also be reformed so that a fair price is paid for land acquired through compulsory purchase, allowing local authorities and development agencies, like Homes England, to free up the most underused areas for sustainability-led regeneration.

### Street votes trial

‘Street votes’ could be another means to agree on the redevelopment of existing areas. This idea lets residents of a street collectively agree to redevelop their houses, either by adding extra storeys or using some of their plots to create homes for others. Dwellings with planning permission to expand would automatically increase in value, to the benefit of the residents.

The value uplift would also be subject to taxation, generating more revenue for local infrastructure. Residents would be able to submit a street plan proposal to their local authority, including a design code for the form the development must take. If the proposal is voted through by a qualified majority, all the homeowners would receive planning permission to redevelop within the new design code.

Street votes should be trialled as a possible route to enabling well designed suburban intensification. Within a green housing policy the dwellings to be built or extended should be entitled to only one resident parking permit (where applicable) and should aim not to increase the number of parking spaces on their lot. If additional dwellings are created, no further parking permits should be awarded.

# Conclusion

“

**The environmental case for building at higher density within urban areas is clear.”**

The UK aims to build 300,000 new homes a year. Where they are built will have long lasting impacts on lifestyles and the environment. From reducing reliance on private cars, to leaving more land for nature, the environmental case for building at higher density within urban areas is clear. Yet, the planning system is too often the barrier rather than the enabler to building sustainably.

The UK should aim to flip this dynamic so that the planning system supports building in sustainable locations. Strategic spatial planning across England would allow a long term vision to be realised for our towns and cities, with protection against climate change and nature’s recovery at its heart. By prioritising land close to public transport for higher density development, new housing stock can allow lifestyles consistent with this vision. Strengthening local authority powers to regenerate and redevelop, and giving residents more power over local decisions would be a good starting point.

# Endnotes

- 1 Department for Levelling Up, Housing and Communities (DLUHC), 2021, 'Live tables on dwelling stock (including vacant)'
- 2 Office for National Statistics (ONS), 2021, 'Housing affordability in England and Wales: 2021'
- 3 L Panigrahi and D Walker, 2020, 'There's more to house prices than interest rates', Bank Underground
- 4 GLA Housing and Land, 2021, 'Housing research note 6: an analysis of housing floorspace per person'
- 5 World Bank, 2022, 'World development indicators: population density per square kilometre of land'
- 6 Centre for Cities, 2021a, *Net zero: decarbonising the city*
- 7 Centre for Cities, 2021b, *Measuring up: comparing public transport in the UK and Europe's biggest cities*
- 8 J I Gimenez-Nadal, et al, 2022, 'Trends in commuting time of European workers: a cross country analysis', *Transport Policy*, vol 116
- 9 Reproduced with the permission of the Centre for Cities.
- 10 Centre for Cities, 2021a, op cit
- 11 Based on: Centre for Research into Energy Demand Solutions (CREDS), 'Placed based carbon calculator', [www.carbon.place](http://www.carbon.place); ONS, 'Lower layer super output area population density mid 2018 dataset'
- 12 Ibid
- 13 World Resources Institute, 2014, *Better growth better climate – the new climate economy report*
- 14 D Hoornweg, et al, 2020, 'Cities and greenhouse gas emissions: moving forward', *Environment and Urbanization*, vol 1(23), pp 5-336
- 15 M Buchs, et al, 2013, 'Who emits most? Associations between socio-economic factors and UK households' home energy, transport, indirect and total CO2 emissions', *Ecological Economics*, vol 90, pp 114-123
- 16 DLUHC, 2022, 'National Planning Policy Framework: draft text for consultation'
- 17 I Chakraborty, et al, 2018, 'Housing price booms and crowding-out effects in bank lending', *Review of Financial Studies*, vol 31(7), pages 2,806-2,853
- 18 Centre for Cities, 2022, *Why are cities in Britain building so many new homes out of reach of public transport?*
- 19 Ibid
- 20 Ibid
- 21 The Royal Town Planning Institute (RTPI), 2021, *The location of development. Analysis of the location and accessibility of approved residential development in England*
- 22 County Councils Network and Catriona Riddell Associates, 2021, *The future of strategic planning in England*
- 23 RTPI, 2019, *Resourcing public planning*
- 24 National Infrastructure Commission, 2018, *Next steps for cities, a new joint work programme on ambitious, effective plans for urban infrastructure*

- 25 The Planning (Scotland) Act 2019
- 26 The Scottish Government, 2022, *National Planning Framework 4: revised draft*
- 27 The Welsh Government, 2019, *Future Wales: The National Plan 2040*
- 28 RTPI, 'Revised draft National Planning Framework 4: RTPI Scotland Parliamentary Debate Briefing'
- 29 Centre for Cities, 2022, op cit
- 30 RTPI, 2018, *Planning risk and development*
- 31 Social, 'Local plans fail to engage people about the future of their areas', [www.social.co.uk](http://www.social.co.uk)
- 32 RTPI, 2020, *The future of engagement*
- 33 Institute for Government, 2014, *Housing that works for all – the political economy of housing in England*
- 34 Coventry City Council Local Plan, adopted December 2017
- 35 See, for example: North West Place, 2 December 2022, 'Manchester rejected £11.5m Curry Mile resi'
- 36 BCP Council, 2021, *Parking standards: Supplementary Planning Document*
- 37 C40 Cities, 2016, *Transit oriented development: good practice guide*
- 38 See for example: Stockholm loop: Belatchew labs, [www.belatchew.com](http://www.belatchew.com)
- 39 Urban Transport Group, 2019, *The place to be: how transit oriented development can support good growth in the city regions*
- 40 Brookings, 2022, 'New Zealand's bipartisan housing reforms offer a model to other countries'
- 41 New Zealand Government, Ministry for the Environment, 2020, *Understanding and implementing intensification provisions for the National Policy Statement on Urban Development*
- 42 New Zealand Government, Ministry for the Environment, 2022, *The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act*
- 43 New Zealand Government, Ministry for the Environment, 2022, *Intensification streamlined planning process*
- 44 Stats New Zealand, 2022, 'Record number of new homes consented exceeds 50,000', [www.stats.govt.nz](http://www.stats.govt.nz)
- 45 Ministry of Housing, Communities and Local Government, 2020, *Research into the quality standard of homes delivered through change of use permitted development rights*
- 46 Planning Advisory Service, 2019, *Local development orders guidance for councils on preparing local development orders*
- 47 Shaun Spiers, 2018, *How to build houses and save the countryside*, Policy Press, pp 125-6
- 48 Green Alliance, 2023, *Circular construction: building for a greener UK economy*
- 49 Offsite Hub, 6 June 2022, 'Modular construction emits 45% less carbon than traditional methods'
- 50 R Bassi, et al, *Benefits of modern methods of construction in housing: performance data & case studies*, BRE, Bristol City Council, Rider Levett Bucknall, Constructing Excellence
- 51 Carbon emissions plotted on the graph includes the embodied carbon of new buildings, operational emissions and car transport emissions.





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