Homes on the right tracks

Greening the Green Belt to solve the housing crisis

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00

Executive summary

Technically, there is an easy solution to the UK crisis of housing supply: find more land for housing. This is not a physical problem but a political one. The land is there but policies and habits of thought prevent its use, while incentives are counter-productive.

This paper sets out a new approach to lining up incentives to set the country on the right tracks for solving the housing crisis in a way that would be to everyone's advantage. To achieve this policy magic there are four ingredients:

1. Release for development all Green Belt or agricultural land within 800 metres of any stations which have a service of 45 minutes or less to a major city, if, but only if, that land has no marker of amenity or environmental value; so no building on National Parks, Areas of Outstanding Natural Beauty or public recreational areas, for example.
2. Introduce a Land Development Charge set at 20 per cent of the market value of all new development when sold. All proceeds of the charge would be used exclusively for identified purposes to ensure the local community's facilities and infrastructure improve and there is generous funding for social housing.
3. Give the newly-created 'development rights' to the land around stations to the companies – such as National Rail, Transport for London, Crossrail or Transport for Greater Manchester[1] – which own the infrastructure and stations. Then require them to set up new, specialist development companies to which the development rights would pass. Since only these development companies would be able to develop the land, they would be able to buy it cheaply with just some reasonable mark-up on agricultural value. At the same time design a careful tapering down of public subsidy to the rail companies so they are incentivised to ensure the land is efficiently developed in the public interest.
4. Set up a Green Development Corporation (GDC) – specially designed Urban Development Corporations – for each city region. Drawing on the experience of the redevelopment of London's Docklands, give these GDCs full planning powers over the land released for development. This

1 Not the franchised train companies since they do not have a long-term commitment to either the infrastructure or the train services.

would make it possible to make quick decisions and take a strategic view of how best to develop all the new land and so maximise both the environmental and social benefits of the development. The latter would notably include optimising and improving the use of the rail system. The GDCs could be set up under the Local Government, Planning and Land Act 1980[2] and could also be responsible for how the revenue from the Land Development Charge raised from developing the land is spent.

The benefits of this approach are clear:

- The amount of land unlocked is large: an estimated 47,000 hectares in just five city regions. That alone would provide enough land to increase the housing stock by 7 to 9 per cent. It would take only 1.8 per cent of existing Green Belt land while providing some 4,700 hectares of new and accessible green space: that is an area 15 times the size of Hampstead Heath and considerably bigger than Sherwood Forest. And, whilst this paper sets out a worked example of the proposal for five city regions, the idea is applicable to all our large cities with Green Belts.
- These new homes would be of high quality. The real price of land for houses has risen more than 15-fold since Green Belts were first imposed and land for urban expansion dried up. The result is far too much money goes into land – creating no community or productive value – and not enough into design and build quality. Land for housing is so expensive because it is in such short supply. This proposal would make land prices fall. If land prices were lower and design guides well worked out, then new housing would be much higher quality. This would help make it more welcome to its host communities.
- These new homes would be much more environmentally friendly too. They would meet modern insulation standards and not be the typical car-orientated developments currently built and by offering shorter commuting times to employment centres, thereby imposing lower carbon footprints.
- Lastly, this proposal would redirect the land-value increases to fund (i) rail services and (ii) better local infrastructure, services and social housing. Currently, when land gets planning permission for housing, its price rises extravagantly, and these windfall gains go to the lucky landowners. Under this new approach, land-value gains would be deployed for the social good rather than private enrichment; and at the same time make new development more attractive to local communities. Capturing land-value uplift to finance commuter rail has a substantial history of success. It is, for example, used to fund the Hong Kong mass transit system making it among the most efficient in the world and one of the very few that does not rely on public subsidy.[3]

2 https://www.legislation.gov.uk/ukpga/1980/65/section/135

3 Suzuki, H., Murakami J, Hong Y-H, and Tamayose B. (2015) 'Financing Transit-Oriented Development with Land Values', World Bank: Urban Development Series.

01

Introduction

This paper sets out a new idea for solving the UK housing crisis: a crisis that is corroding social and inter-generational cohesion and at the same time making regional inequality far worse, reducing national economic performance. It is also of course, increasing homelessness as well as making people live in inadequate housing in places they would not necessarily choose to live.

In England, the real price of houses has nearly doubled in every decade[4] since supply of urban land was frozen by the introduction of Green Belts in 1955. In a world where house prices double in real terms every decade there is a powerful incentive to be a homeowner. Miss out at the age of 25 and one risks permanent exclusion from the housing wealth ladder provided by ever rising house prices. Home-ownership steadily rose from 32 per cent in 1953 to around 70 per cent in the early 2000s, but has now dropped back to less than 64 per cent. For people born in the 1950s the homeownership rate exceeded 70 per cent before they got to 34.[5] In the 12 years to 2016, however, homeownership rates for the under 34s have fallen from 59 per cent to 34 per cent and have since fallen further. Younger people have been priced out of ownership.

If house prices were stable over time, not owning a house would not add to inequality or hamper mobility. Germany and Switzerland, for example, have sensible planning and local tax systems and they build enough houses to satisfy demand: so over 50 years house prices have been stable in real terms and half or, in Switzerland, more than half the population, choose to rent. In contrast, in England 62 per cent of all personal assets are in the form of housing. So rising prices redistribute to owner occupiers and the old.

4 Cheshire, P., Nathan M. and Overman H. (2014) 'Urban Economics and Urban Policy: Challenging Conventional Policy Wisdom', Cheltenham, Edward Elgar.

5 Cribb J., Hood A. and Joyce R. (2016) 'The economic circumstances of different generations: The latest picture', London: Institute for Fiscal Studies.

The 2003 Barker Report on housing concluded there was a real problem of housing affordability in the UK, which would cause social discord as well as welfare and economic loss.[6] The simplest measure of housing affordability is the ratio of median house prices to median incomes. A ratio of three is widely regarded as the upper limit of affordability. Between 1996 and 2003 the ratio in England and Wales had worsened from 3.84 to 5.83. By 2018 it stood at 7.8.[7]

While all UK cities are now above the affordability threshold set out in the Barker Report, the epicentre of unaffordability is in the South and East of England. In 2018 the most affordable – or more accurately – least unaffordable local authority in the area south of the line from The Wash to Bristol, was Peterborough, where the ratio was 6.79. In Bristol, itself, the ratio was 8.74, in Cambridge 12.95 and in Oxford, 11.12. The least unaffordable London Borough was Tower Hamlets with a ratio of 9.84 but in a quite ordinary borough, like Ealing, it was 15.54. In contrast, in the major cities elsewhere in the country, the two most affordable were Liverpool and Hull with ratios of respectively 4.0 and 4.36; but others, like Leeds (6.27), or York (8.86), were very clearly unaffordable.

Apart from the intergenerational inequality and lack of access to decent housing, this also causes clear economic costs. Regional differentials in house prices mean that to move from a declining to a prosperous labour market one has to be very young. Once on the housing ladder in Hull or Liverpool there will be no chance of finding equivalent housing in a place with better access to well-paid jobs. So it becomes more difficult for individuals to offset for regional inequalities by moving, and regional adjustment is made more difficult as local economies grow or decline. Equally the supply of labour is choked off in those labour markets where people would be most productive. The booming modern economies of Cambridge or Bristol cannot expand because house prices deter people from moving there. People are trapped in less productive places, or else they have to commute inordinate distances.

The root of the problem is building too few houses over more than a generation and building the wrong sorts of houses in the wrong places. The scale of the housing supply shortfall in England can be highlighted by comparing the actual number of houses built in the last 30 years to the number built in the previous 30 years, 1959 to 1988. Between 1959 and 1988, approximately 7.5 million homes were built, whereas only 3.3 million homes were built in the last 30 years. This suggests a total shortfall of 3.1 million homes.

6 Barker, K. (2003) 'Review of Housing Supply: Securing our Future Housing Needs: Interim Report – Analysis', London: HMSO.
7 https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingaffordabilityinenglandandwales/2018

And there was even more systematic undersupply where demand was strongest – where people were trying to move to and where they wanted to buy more space in homes. For example, over the nearly 40 years from 1980 to 2018, 56,340 houses were built in Barnsley and Doncaster combined, while population increased in those cities by 22,796. In contrast, in Oxford and Cambridge only 29,430 houses were built but population grew by 95,079.

Homes do not only vary in their location. As people get richer, they try to buy better houses and better houses are roomier; they have a garden; they are semi-detached, even detached, hence requiring more land. This is clear when looking at what has happened over the long term in the Greater London area. It is claimed that, of course, house prices have risen because population has increased so fast. Migration is even blamed. Look at the facts however and one finds that between 1951 and 1981, when London's population fell by 17 per cent, still real house prices increased by 72 per cent. And, over the whole period 1951 to 2011 London's population hardly increased at all – up by 0.1 per cent, but real house prices over the same period rose a staggering 463 per cent. It was rising real incomes pressing against a fixed area of land that drove this.

02

The case for a better use of Green Belt land

The housing crisis is a symptom of a wider crisis for English society and for economic progress. The next chapter shows how it could be possible to hugely increase both the social and environmental value of the Green Belt. The low social and environmental value of large tracts of Green Belt land is a reality and underpins the proposal in this paper. Then, after outlining the proposal, Chapter 3 shows how much land of little environmental or amenity value there is available close to commuter stations. Building on this land would have no negative social or environmental impact. Chapter 4 suggests how substantial funds for rail services, social housing, infrastructure, and services for the local community could be raised from allowing development of land around stations before then outlining a mechanism for developing that land in an environmentally positive way.

If the housing problem stems from persistently, over more than a generation, not building enough houses and not building them in the right places, what underlies this failure? Why can other countries build enough houses and still have stringent environmental protection?

Green Belts are the primary cause behind the UK housing problem

There are multiple policy failures damaging housing supply,[8] but the lack of land where there is demand for housing is critical.

It is not that England has a shortage of suitable land but, with the introduction of Green Belts in 1955, policy deliberately froze the supply of land available for housing around our major cities.

The idea of Green Belts may have started as 'green lungs for cities' but as implemented in 1955 that was not their purpose. Being called Green Belts makes them sound as if they are to provide recreational or amenity land for public

8 To name just some of these other causes there is the politicisation of planning decisions enabling NIMBYism. There are tight regulations which make building high very difficult. Our system of local government finance in effect fines local communities if they allow development: they have an obligation to provide services but get very little extra revenue. In this paper resolving the land supply bottleneck is the focus, although the proposed Land Development Charge would provide a needed incentive to local communities to accept development.

enjoyment. This is unfortunately not true. The name is rhetorically powerful because it borrows the positive connotations of the original idea and it certainly sounds 'green'.

Rather, the purpose of Green Belts as they have existed since 1955 is to prevent building: to stop 'settlements' merging. As Duncan Sandys, the Minister of Housing, wrote when imposing the Metropolitan Green Belt: "even if... neither green nor particularly attractive scenically, the major function of the Greenbelt was... to stop further urban development".[9] That remains their function as confirmed in the National Policy Planning Framework of 2012 and again in 2019. The purpose of Green Belts is to be empty spaces between cities, originally to protect the Home Counties from the encroachment of London and force urban expansion to jump over Surrey or Hertfordshire to Northamptonshire, Cambridgeshire or Hampshire.

Preserving land that offers public benefits is vital, but that is not what Green Belts are for

Britain is in no danger of being 'concreted over'. Across England's regions, the Generalised Land Use Data of 2005 showed that the proportion that was not built on – farmland, forest or park but not including gardens or water – varied from 38 per cent in the Greater London Authority area to 91 per cent in the North East or South West. Many people find this difficult to believe: but satellite imagery and modern GIS measurement show it is true. Even English cities are green: gardens on average take up half the 'built-up space'.

Furthermore, Britain was one of the pioneers in preserving environmentally valuable land such as scarce habitats and scenically beautiful land from development. There are good reasons for this. Such land provides a public good which markets would not effectively provide. That is why the UK has National Parks, Sites of Special Scientific Interest (SSSI), Nature Reserves, Areas of Outstanding Natural Beauty (AONB) and, of course, land managed by the National Trust and parks for recreational use. Most of these designations are designed not just to preserve the landscape but to improve access to the countryside. The exceptions here are some land preserved for habitat where understandably the interests of wildlife may dominate and AONB land where access is only on public footpaths. The land preserved from development in all these ways generates public benefits that markets left to themselves would not deliver.

In contrast, most Green Belt land is privately owned, without public access and its biggest use is as intensive arable farming. Some 74 per cent of Green Belt land in Cambridge, 54 per cent for York, 44 per cent for Nottingham and Oxford and 39 and 37 per cent respectively for Birmingham or London is used for this purpose. Intensive farmland is far from green because intensive farming is one of the most environmentally damaging of all land uses.[10]

Moreover, the total area of Green Belts is very large and has changed very little over time; they cover nearly one-and-a-half times as much land as all development. In 2005, 47,300 hectares of the Bournemouth Green Belt was

9 Hall, P.G. (1975) 'Urban and Regional Planning', Harmondsworth/London: Penguin.

10 Firbank, L., Bradbury R., McCracken D., Stoate C., Goulding K., Harmer R. and Williams P. (2011) 'Enclosed Farmland', The UK National Ecosystem Assessment Technical Report. UK National Ecosystem Assessment. Cambridge: UNEP-WCMC.

transferred to the New Forest National Park giving it even greater protection from development. If that area is not counted as 'lost' and so is subtracted from the previous total, the total Green Belt area grew from 1,605,000 hectares in 1997 to 1,630,000 hectares in 2018 – only a miniscule fall from the peak of 1,640,000 in 2011.

Because it is not possible to build houses on Green Belt land, there is little competition, so golf courses proliferate. The area of golf courses in Surrey is considerably greater than the area covered by houses and other domestic buildings.[11] And in the Greater London Authority area, where 35,200 hectares or 23 per cent of the land is Green Belt, the area of golf courses is more than twice that of the Royal Borough of Kensington and Chelsea.[12]

These things together suggest that, currently, public benefits for just Green Belt designation are, at best, very limited.

A different approach to Green Belt land would offer larger public benefits

Some time ago, in the search for sensible places to allow building, two people independently came up with the idea of building on land around stations giving easy access to London.[13] The Green Belt, however, is fiercely defended by some people – especially home-owners who live within it – and its blanket protection is the very reason some influential lobbies exist. Opposition to building on parts of it is fading but nevertheless persists, and the idea has not yet got into policy.

Apart from there being far too little of it, there are at least two problems with new housing. Nearly all new housing developments are on a relatively small scale, a scale far too small to justify new rail investment: so it tends to be car orientated, clogging up local roads and adding to the carbon footprint.[14] This helps generate a second related problem: how to pay for an efficient rail system. Railways, especially commuter rail with its problems of peak usage, cannot survive on fares alone. As things stand they need subsidy. Successive governments have been struggling with that problem since the 1980s.

The purpose of the proposal set out in this paper is to address these problems, while enhancing the value of Green Belt land: both its value to individuals, but also its social and environmental value. People would greatly value a better chance of finding a home they could afford, in places giving good access to jobs they want. That much is obvious and would be a private benefit. But new houses, of which presently the UK builds so few, are much more energy efficient than older ones, so over time just more building would reduce the carbon footprint – bringing social benefits as well.

11 Cheshire, P. (2014) 'Turning houses into gold: don't blame the foreigners, it's we Brits who did it', CentrePiece, Spring.

12 London First (2015) 'The Green Belt: A place for Londoners?', London: London First

13 Barney Stringer of QUOD https://barneystringer.wordpress.com/2014/06/17/is-the-green-belt-sustainable/ and Paul Cheshire of LSE http://spatial-economics.blogspot.co.uk/2014/07/building-on-greenbelt-land-so-where.html

14 Northstowe, a development on a former RAF airfield 8km outside Cambridge, is one of the largest current residential projects in England. Initiated in 2003 and with completion expected by 2030, there are planned to be 10,000 homes. Enough to justify investment in a guided busway: far too little to justify rail investment.

These benefits would be much larger than those of current developments. By focusing development in many, often larger communities, around existing commuter stations, the proposal provides both an incentive to ensure rail use is maximised and a planning process that would guarantee it without the need to build new infrastructure. It would take existing intensive farmland in the Green Belt around stations, it is true, but there is currently limited access to that land and, because intensive agriculture is so environmentally destructive, there would be a net environmental gain just by not intensively farming it. Gardens have far greater biodiversity as well as providing family-friendly, accessible green space to enjoy. Furthermore, the proposal requires that 10 per cent of all the buildable land identified should not be built on but reserved as public open space and parks, so there would be a net addition to valuable green space and more wildlife habitat.

A more subtle environment gain would also come from bringing people closer to where they worked. Green Belts may be defended as an instrument of 'containment' but sadly this is not true. Not only do they prevent people living within easy commuting distance of better-paid and more-productive jobs but, in their search for affordable housing space, people jump over them. Changes in commuting patterns between 2001 and 2011 reveal this. Ultra-long distance commuting for people with jobs in central London has systematically increased. The mean distance from London Zone 1 of the 10 wards with the biggest proportionate increase in employed residents commuting to London was 166km, a round trip of 332km per day.

If there were cheaper, better, greener and more plentiful housing around commuter stations, people would be able to choose shorter commuting distances: both a private and a social/environmental benefit.

03

A new approach to Green Belt land

Using land in the socially and environmentally best way, not just slavishly following arbitrary designations, together with aligning incentives, is the solution to the UK housing supply crisis. What this means in practice is releasing more land for high-quality homes, doing so with no environmental damage and ensuring the benefits of the land-use changes flow back to the local communities.

Releasing Green Belt around stations in just five city regions could provide enough land for as many homes as were built in the whole of England in the last 15 years

If Green Belt land and so-called 'white land' – that is land outside built-up areas but not allocated for development – within a short walk (800m) of a 'commuter station' serving a major city were made available, how much land could be released? And how many additional houses might that accommodate, still allowing generous retention of land for publicly-accessible green space?

This chapter sets out the answer to these questions for five major English city regions: Birmingham, Bristol, London, Manchester and Newcastle.

In each case, the procedure of defining each city region started by identifying a station or stations to locate the employment centre of each city – the 'entry stations'. Details of the employment centres' entry stations are listed in Table 1.

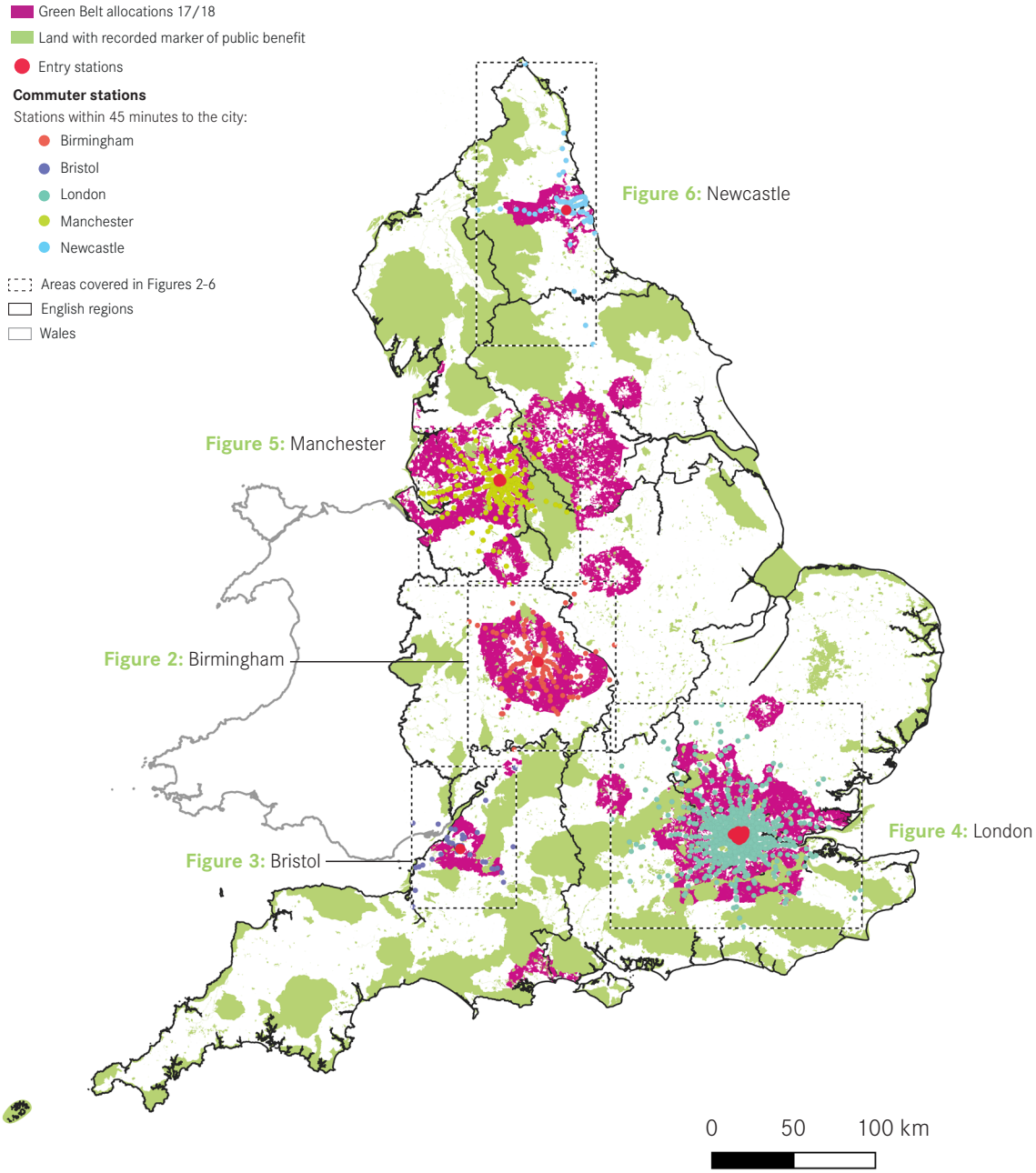
Table 1: Entry stations to for each city region

	Number	Station owner	Station names
London	26	National Rail, Transport for London, future Crossrail	Peripheral stations within Zone 1 and Zone 1-2 boundary
Bristol	1	National Rail only	Temple Meads station
Birmingham	3	National Rail only	New Street, Moor Street and Snow Hill stations
Manchester	5	National Rail, Metrolink	Manchester Piccadilly, Oxford Road, Victoria, Cornbrook and New Islington stations
Newcastle	4	National Rail, Tyne and Wear Metro	Newcastle Central, Haymarket, Monument and St James stations

The next step was to identify all plausible 'commuter stations' serving each centre with a train suitable for commuting, taking no more than 45 minutes. To do this an algorithm was devised combining National Rail mobility data from the Rail Delivery Group supplemented with data from the Google Maps API, existing Metro and Tube timetables and future Crossrail services.

Outlying commuter stations were cross-checked against National Rail's online Journey Planner for their travel times to entry stations. For local transport such as Tube or Metro, Google Maps or the relevant journey planner were consulted. So far as possible, all stations with trains that would not be suitable for commuting (e.g. services which have only one fast train service per day) were manually excluded. The 'spider' maps in Figure 1 show the final set of commuter stations within 45 minutes as points, where each cluster is colour-coded to show the city it serves. All entry stations are illustrated in red.

Figure 1: Stations within 45 minutes or fewer of the five major English city regions



For each of these commuter stations, land use within an 800m radius was extracted using parcel-based, pre-classified UK satellite imagery published by the Centre for Ecology and Hydrology.[15] The 800m distance threshold is arbitrary but was chosen, as it is equivalent to a 10-minute walk. One could think of extending the radius to 1km or even to 2km if the developments were cycle-based with cycle parking at commuter stations as in the Netherlands. Such adjustments could in turn suggest reducing the 45-minute train service threshold to 40 minutes. However, for the illustrative example in this paper the thresholds chosen are a radius of 800m and travel time of 45 minutes or fewer.

To produce the estimate of available land within walking distance of commuter stations two assumptions were made:

1. There would be no further building on land already classified as urban or even suburban.
2. Any land with a recorded marker of public benefit would be excluded. Land of public benefit was interpreted to mean land with an identifiable scenic, historical, ecological, recreational or amenity value. This meant discarding seven land classifications: (i) Areas of Outstanding Natural Beauty; (ii) National Parks; (iii) Country Parks; (iv) Sites of Special Scientific Interest; (v) land under the protection of the National Trust or recorded by Historic England as a park or public garden; (vi) historic battlefields; and (vii) cemeteries as recorded by OpenStreetMap. These are represented in green on all maps. Finally, to ensure only land of little or no environmental or special scenic value was included, all land in the extracted satellite imagery classified as bog, unimproved or acidic grassland, or heathland was also discarded.

Noting the proviso about woodland below, the final results are a summary of all land that could be defined as 'buildable' if it were not for its designation as Green Belt or its use as intensive farmland. These results provide an estimate of all land within a 10-minute walk of a reasonably-connected station, on which there would be no obvious ecological or historical reasons to prevent new homes from being built.

The upshot is that buildable land, as identified here, is currently classified as intensive arable or horticultural land; 'improved' and 'neutral' grassland; and woodland whether broadleaf or coniferous. Woodland was included as buildable on the grounds that the proposal requires 10 per cent of the land be set aside as publicly-accessible green space; and managed woodland is very well suited for that purpose. In practice, most of the woodland identified near stations would remain as woodland but be managed as public green space.

15 Rowland, C.S.; Morton, R.D.; Carrasco, L.; McShane, G.; O'Neil, A.W.; Wood, C.M. (2017) 'Land Cover Map 2015 (vector, GB)', NERC Environmental Information Data Centre. https://doi.org/10.5285/6c6c9203-7333-4d96-88ab-78925e7a4e73

Table 2: Buildable land around stations

City region	Arable and horticulture	Woodland	Grassland	Total
Birmingham	32%	13%	55%	100%
Bristol	16%	5%	79%	100%
London	19%	18%	63%	100%
Manchester	15%	26%	58%	100%
Newcastle	40%	21%	39%	100%
All city regions	22%	19%	59%	100%

Regional proportion				
Outside Green Belts	18%	20%	61%	37%
Within Green Belts	23%	18%	58%	63%

Area of buildable land in hectares				
City region	Arable and horticulture	Woodland	Grassland	Total
Birmingham	1,875	727	3,184	5,786
Bristol	238	81	1,214	1,532
London	4,795	4,404	15,567	24,766
Manchester	1,681	2,896	6,400	10,977
Newcastle	1,517	809	1,479	3,805
All regions	10,106	8,917	27,844	46,867
Outside Green Belts	3,138	3,514	10,493	17,145
Within Green Belts	6,968	5,403	17,351	29,722

Table 2 above shows the estimates of all buildable land across all five city regions. The estimates are split by land class and Green Belt designation. In total there is nearly 47,000 hectares of buildable land. Most of this, 63 per cent, is presently designated as Green Belt although that proportion varies between the city regions. It is lower in Bristol and Newcastle because in those city regions a significant proportion of the land within 800m of the commuter stations is either in an AONB or a National Park, so not buildable. Although 63 per cent of the land would come from existing Green Belts that would represent only about 1.8 per cent of the current extent of Green Belts in England.

The different current uses of this buildable land are quite similar whether presently designated as Green Belt or not: over half is grassland, 61 per cent and 58 per cent respectively. Across all regions, there is more land near stations that is classified as woodland outside of Green Belts.

How many houses this 47,000 hectares of land would accommodate depends on the assumption one makes about the density of development. Taking Northstowe – one of the largest current residential projects in England as illustrated in footnote 14 – as an example, then the low density is 35 to 40 dwellings per hectare and the medium 41-60.[16] Based on these assumptions, calculating the number of houses at either 40 or 50 to the hectare implies that the total extra construction in the land identified for the five city regions could be between 1,687,270 and 2,109,040 – about the number of all the houses built in the whole of England in the past 15 years. Since the current stock of dwellings in the whole of England is 24,172,000[17] this would represent an increase of between 7 and 8.8 per cent: and it is only calculated by applying the policy to five representative city regions. Moreover, these houses would be located where demand is greatest – within easy reach of jobs.

Table 3 summarises the results for each of the five city regions and the following paragraphs outline how the proposal would work in each of them as well as its impact in more detail. In all maps, green indicates either ecologically or historically precious land, and fuchsia identifies all Green Belt land. A heat map is applied on identified commuter stations to highlight the extent of buildable land which is shown in black.

Table 3: The total impact of green growth in the Green Belt

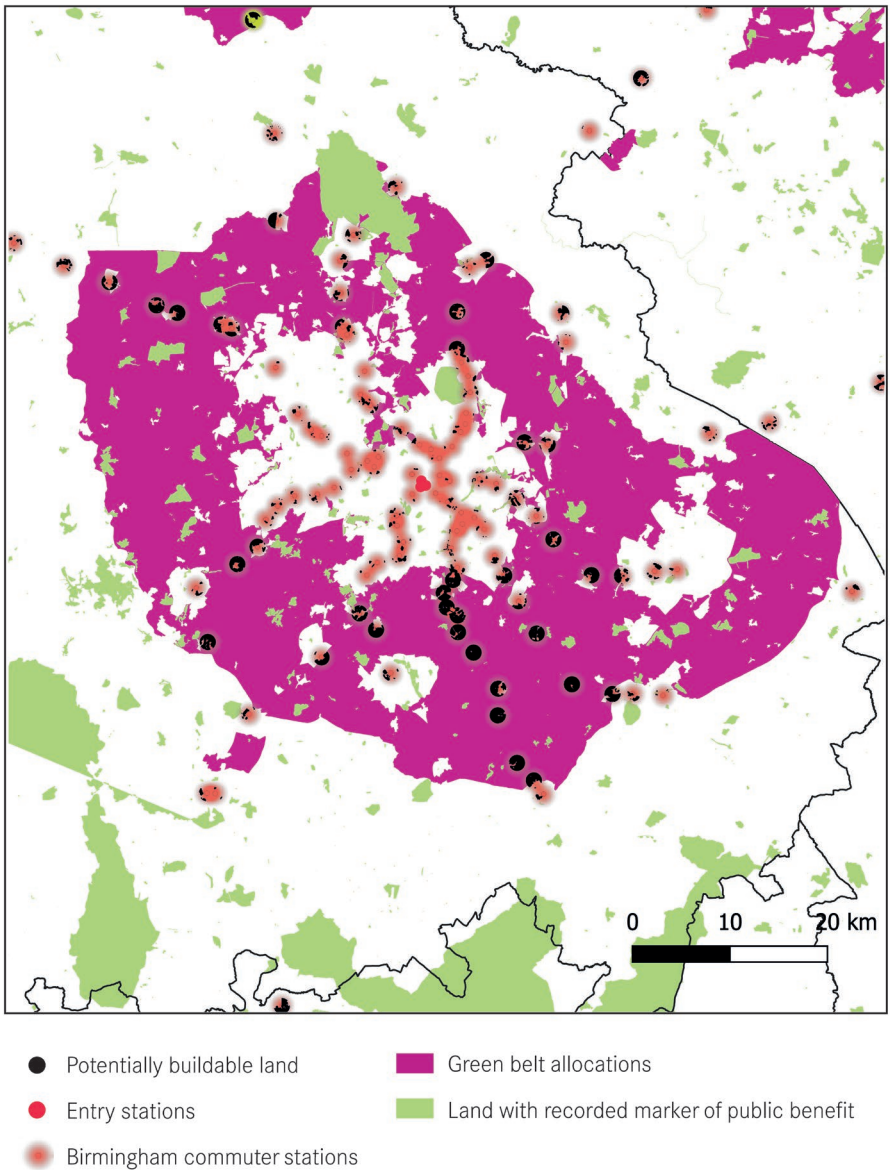
City region	Total buildable area		New accessible green space (ha)	House prices (£)	Houses at 40 per ha	LDC revenue (£bn)	Houses at 50 per ha	LDC revenue (£bn)
	ha	of which GB						
Birmingham	5,786	72%	579	195,000	208,280	8.1	260,340	10.2
Bristol	1,532	24%	153	265,000	55,200	2.9	68,950	3.7
London	24,766	68%	2,477	370,000	891,600	66.0	1,114,500	82.5
Manchester	10,977	62%	1,098	152,000	395,200	12.0	494,000	15.0
Newcastle	3,805	40%	381	130,000	136,990	3.6	171,250	4.5
Total	46,867	63%	4,687		1,687,270	92.6	2,109,040	115.8

The next paragraphs will also show the revenues that would be produced for each city region if the proposed Land Development Charge were applied. This calculation requires making an assumption as to the average house price for the additional homes as well as about the number of dwellings the buildable land would provide. House prices are taken from the work done for Cheshire et al (2018) because these are the only prices known to have been estimated for city regions rather than government regions or local authorities.[18] The price estimates were based on Land Registry data for the third quarter of 2016, and the total revenue yielded across the five city regions would have been around £100 billion.

16 https://www.scambs.gov.uk/media/8075/design-access-statement_lowres_part_6.pdf
17 https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-including-vacants
18 Cheshire, P., Hilber C. A. L. and Koster H. (2018) 'Empty Homes, Longer Commutes: The Unintended Consequences of More Restrictive Local Planning', Journal of Public Economics, 158, 126-51.

Birmingham

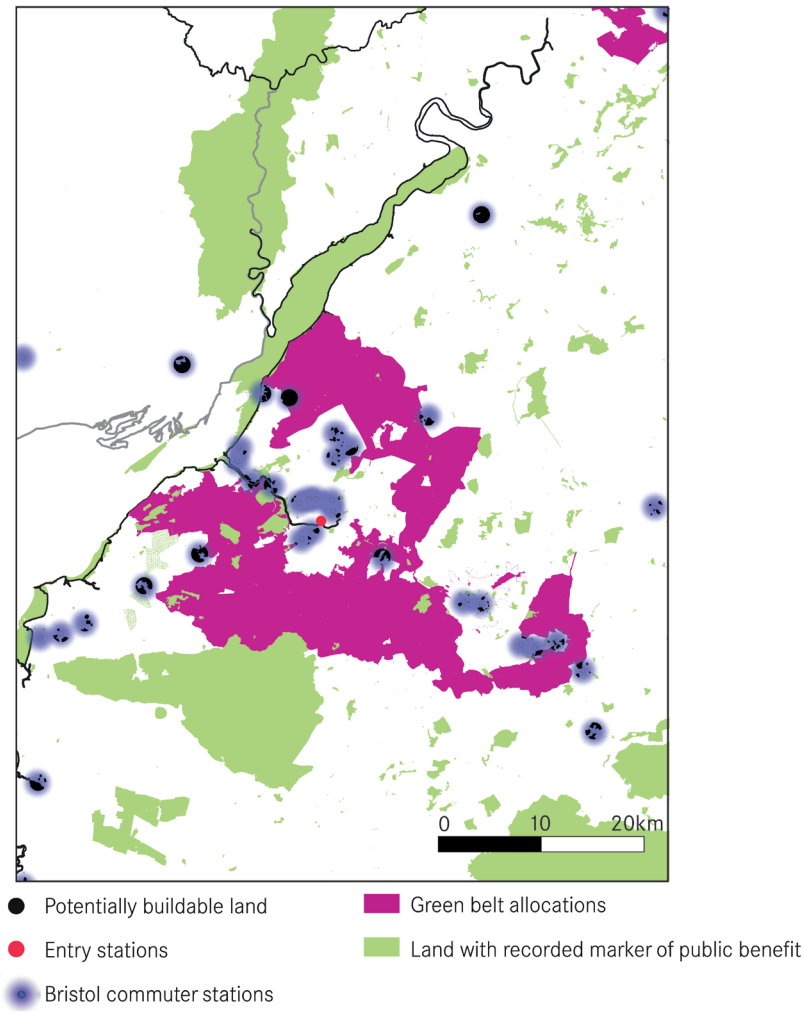
Figure 2: Land in the Birmingham city region



There are 116 commuter stations within the Birmingham city region providing services to central Birmingham within 45 minutes. As Table 2 shows the total area of buildable land identified was 5,786 hectares. Allowing for 10 per cent of this buildable land to be devoted to publicly-accessible open space still leaves 5,207 hectares for housing development. Assuming a density of 40 houses per hectare, this would enable the creation of 208,280 homes, generating some £8.1 billion in revenues.

Bristol

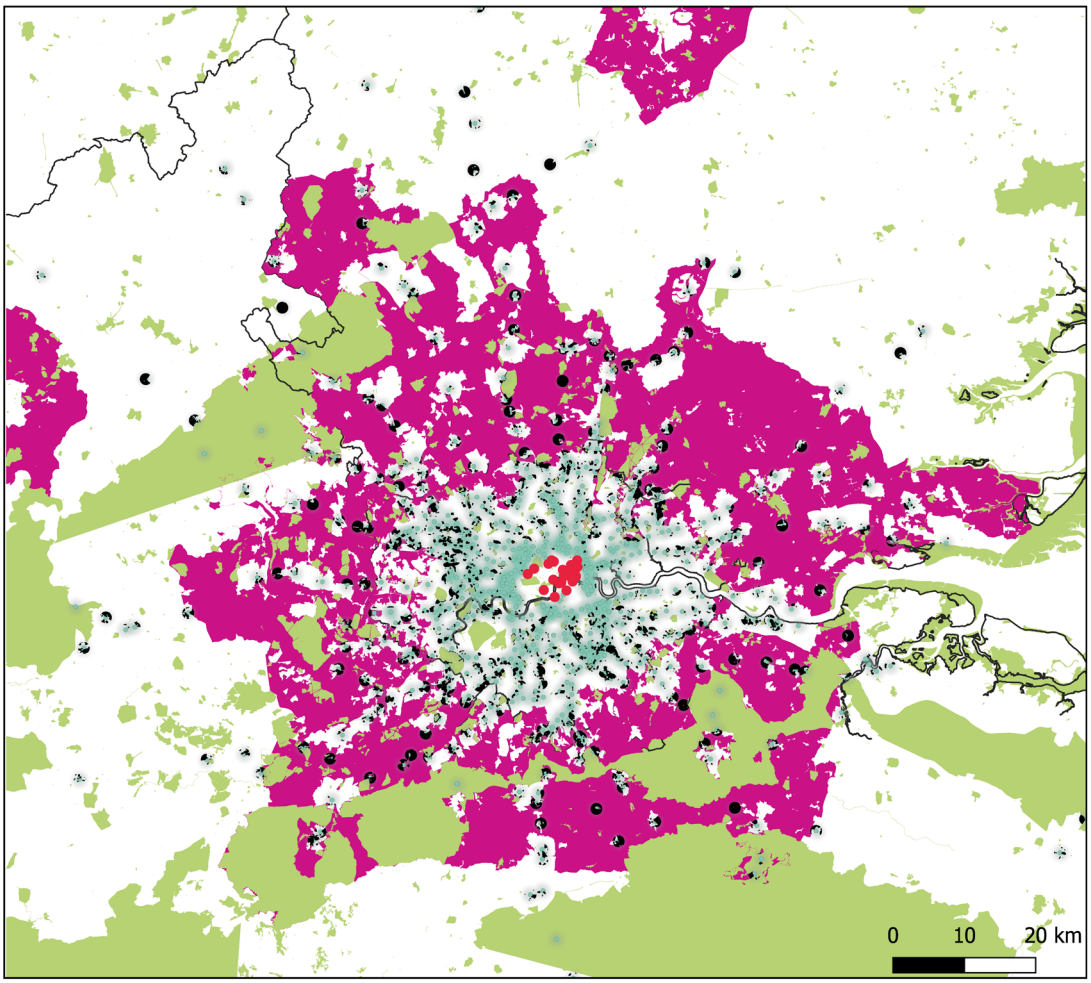
Figure 3: Land in the Bristol city region



There are 36 commuter stations within the Bristol city region providing services to central Bristol within 45 minutes. As Table 2 showed the total area of buildable land identified was 1,532 hectares. Allowing for 10 per cent of this buildable land to be devoted to publicly-accessible open space still leaves 1,379 hectares for housing development. Assuming a density of 40 houses per hectare, this would enable the creation of 55,200 homes, generating some £2.9 billion in revenues.

London

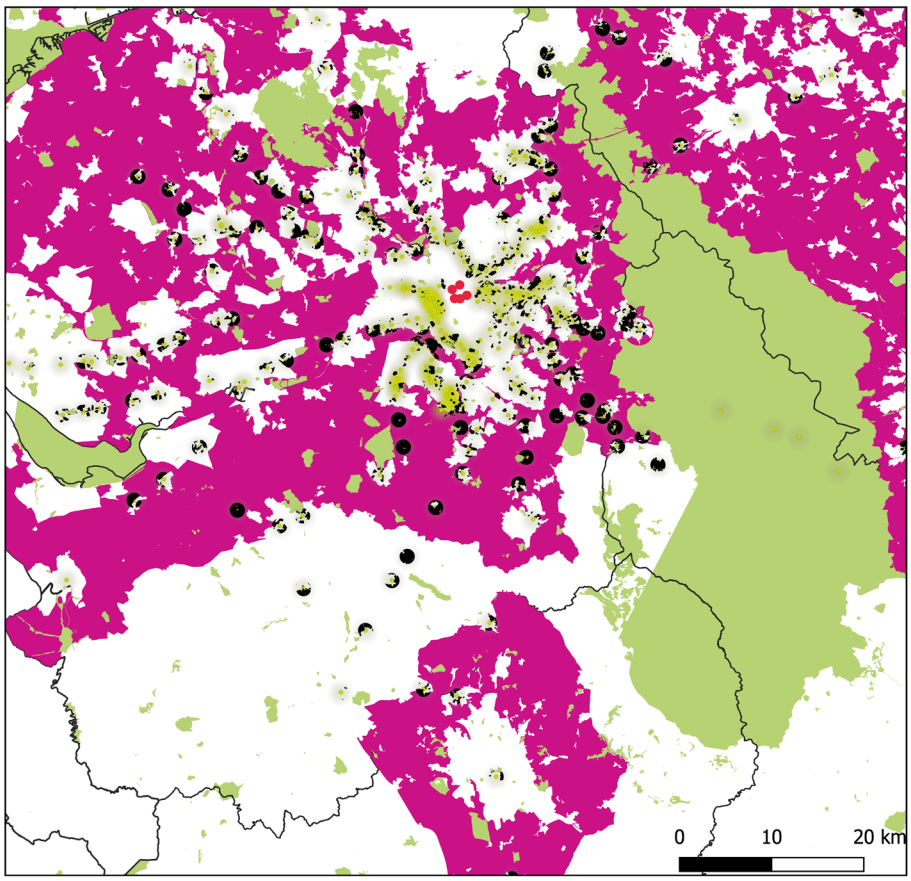
Figure 4: Land in the London city region



As would be expected, London has more commuter stations within 45 minutes than any other city. There are 567 stations within the city region providing services to Zone 1 within 45 minutes. As Table 2 showed there is an estimated total of 24,766 hectares of buildable land within 800m of these stations. Again, assuming 10 per cent was reserved for new, accessible green space there would still be 22,289 hectares of land for housing. Assuming a density of 40 houses per hectare, this would enable the creation of 891,600 homes, generating some £66 billion in revenues.

Manchester

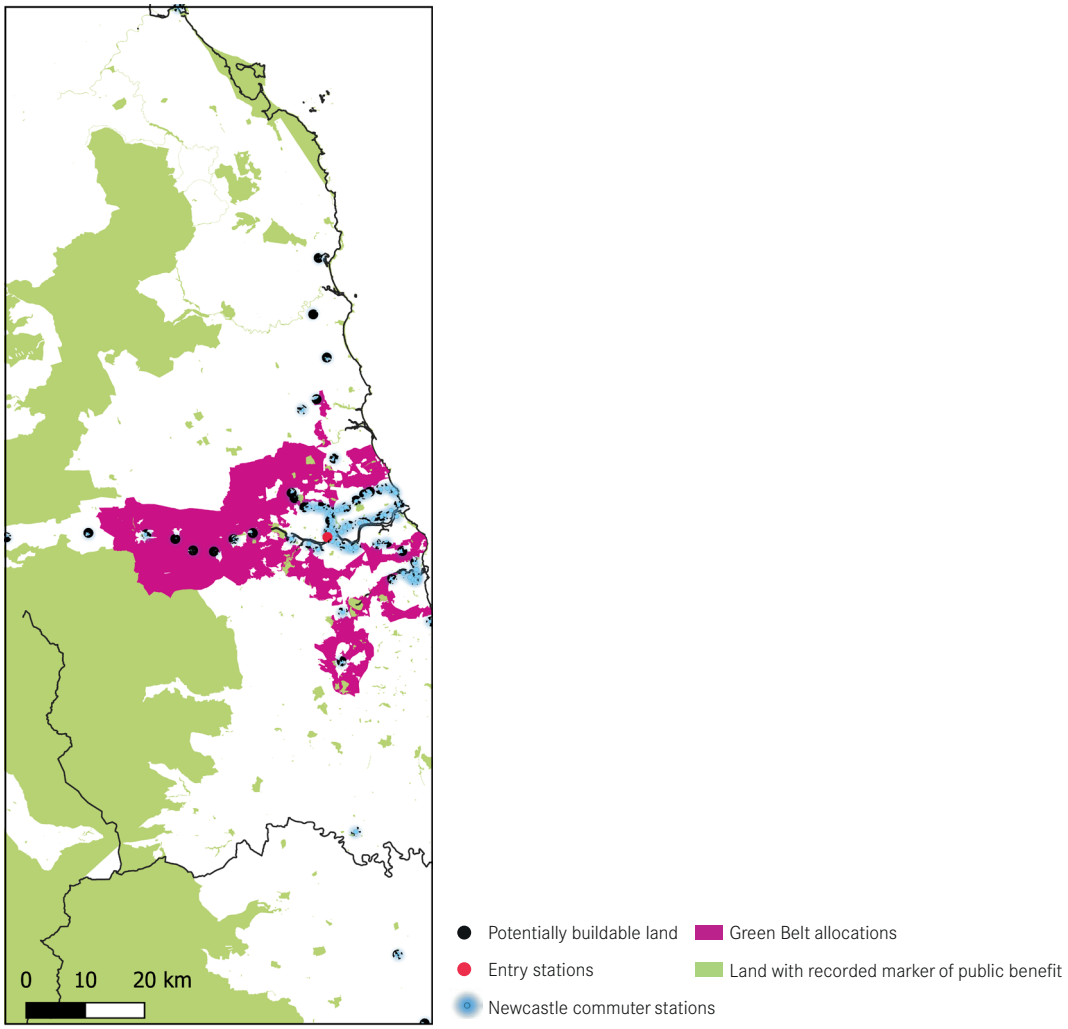
Figure 5: Land in the Manchester city region



In the Manchester city region, there are 242 qualifying commuter stations. The area of buildable land within 800m of them is shown in Table 2. There is a total of 10,977 hectares. On the same assumptions as before this would allow for 1,098 hectares of new accessible green space but would still leave 9,879 for new housing development. Assuming a density of 40 houses per hectare, this would enable the creation of 395,200 homes, generating some £12 billion in revenues.

Newcastle

Figure 6: Land in the Newcastle city region



In the Newcastle city region, there are 74 qualifying commuter stations. The area of buildable land within 800m of them is shown in Table 2. There is a total of 3,805 hectares. On the same assumptions as before this would allow for 381 hectares of new, accessible green space but would still leave 3,424 hectares for new housing development. Assuming a density of 40 houses per hectare, this would enable the creation of 136,990 homes, generating some £3.6 billion in revenues.

04

How would the new system work?

Introducing a Land Development Charge to capture the increase in land values for social purposes

The extreme restriction on land supply for housing means that at present a price of £3 million to £7 million per hectare would be common for housing land with permission in most of southern England: at the fringes of London the price might be £17 million to £25 million per hectare. This compares with the price of agricultural land of some £20,000 per hectare.[19] At present, this incredible windfall gain goes to the lucky landowner and is fully reflected in the cost of housing. If only the development arms of the rail companies had rights to develop the land, then they would be the only buyers willing to pay much more than the current use value; so the land would be available to them at a price not much more than its agricultural value.[20] Out of this value uplift, the public subsidy to commuter rail could, over time, be replaced.

If local communities are really to welcome development, however, there needs to be a transparent and easy way to understand flow of substantial resources to offset for the costs that new development necessarily imposes. New development has very localised costs: there is noise, dirt and extra traffic during construction, some residents lose views to open land and there is extra pressure on local schools and roads when people move into the new houses. To compensate existing residents properly, there not only has to be enough revenue, but it needs to be safeguarded from 'revenue equalisation' (otherwise the funding ceases to be an incentive) and also from just filling holes in budgets, Treasury depredations or sometimes arbitrary local decisions. The simplest and most transparent instrument possible would be to introduce a Land Development Charge set at 20 per cent of the market price of all new development, commercial or residential, when it was sold.

19 See https://www.gov.uk/government/publications/land-value-estimates-for-policy-appraisal-2017

20 There might be an argument for powers of compulsory purchase – to be exercised by the GDCs – being available in the background although using them would cause delay and might cause legal issues revealed in a famous case, Myers vs. MKDC, heard in 1974.

Present methods of capturing any part of the increase in land values resulting from transport improvements or development permission are highly ineffective. As argued in Cheshire (2018), Section 106 agreements are very costly to negotiate and only worth doing with bigger developments and large local authorities with the necessary experience and skills.[21] Of even larger developments – 100 to 999 houses – at most only 30 per cent involved a Section 106 Agreement and over the past four years only 15 per cent of all local authorities accounted for half of all Section 106-based affordable housing.[22] Worse, Section 106 Agreements introduce additional uncertainty into the development process – already a risky business since costs are upfront but returns are well into the future. This additional uncertainty forces developers to charge a higher risk premium meaning that otherwise viable developments cease to be worth doing. The result, therefore, is that fewer houses in total are built, reducing supply still further. The disadvantages of the Community Infrastructure Levy (CIL) are also well known.[23]

If all existing charges, including planning obligations, such as Section 106 and CIL, were abolished but developers had to pay a 20 per cent charge on the sale price of all development, this would generate a very large flow of additional revenues. Table 3 showed that on reasonable assumptions this could yield over time a total of £100 billion compared to total local authority budgeted expenditure for 2015/16 on housing, planning and development of £2.89 billion. Since the figure for the total yield raised by the proposed Land Development Charge relates only to housing development but the proposal is to raise a similar charge on commercial development too, the actual yield would be significantly greater.

It would be vital that, if such a Land Development Charge were imposed, the revenues it raised would be subject to absolutely clear and binding conditions:

1. The same percentage rate would have to be charged in all locations and for all types of development. This would allow the resource allocating mechanism of the market to work effectively. If different places could charge whatever they wanted, as with CIL, then not only would this inject complexity into the idea, it would mean that rates could be manipulated (as with CIL) to discourage development or discourage developments of particular types.
2. Revenues raised from the Land Development Charge would be safeguarded from revenue equalisation schemes in order to retain the incentive effect of the charge. Any revenue going to local authorities should therefore not be counted as part of their income for the purposes of central government calculations.

21 Cheshire, P. (2018) 'Broken market or broken policy? The unintended consequences of restrictive planning', National Institute Economic Review, 245, August, R9-19. http://eprints.lse.ac.uk/90240/

22 MHCLG Live Table 1111

23 Cheshire, P. (2018) 'Broken market or broken policy? The unintended consequences of restrictive planning', National Institute Economic Review, 245, August, R9-19. http://eprints.lse.ac.uk/90240/

3. Revenues raised by the Land Development Charge would have to be spent on just three activities:
    - Funding investment in any type of infrastructure to support the additional development and ensure the local community's services are maintained at an equivalent or better level than before the new development. This spending could include for example: roads and other transport, health, education and training related facilities, strategic utilities infrastructure, green space or recreational facilities. The balance would vary according to the added load to existing infrastructure and services produced by building the new homes. One could imagine an Infrastructure Impact Statement along the lines of an Environmental Impact Statement being part of any proposal for housing developments exceeding 10 dwellings;
    - Funding social housing – whether funded directly or via social housing providers;
    - Funding the costs of running a body overseeing the collection and management of such charges. This should be strictly monitored and when the flow of funds started – it would take perhaps five years after its introduction for the new housing to start being sold – an upper limit on the proportion going to the overseeing body should be set.

The advantages of tying in the way in which the revenues for the Land Development Charge could be spent are that it would so far as possible retain the efficiency of the allocative process; it would compensate the local community by maintaining, even enhancing, the quality and quantity of local infrastructure; it would provide a substantial and steady flow of funding for social housing without the deadweight losses associated with Section 106; and it would assist developers by providing proper funding for the planning process and adequate infrastructure and a much simpler system to support development. In the present context, it would also provide a secure source of revenue to fund the body overseeing this new approach.

05

Conclusion

Establishing a Green Development Corporation for each city region

In order to facilitate and speed up the development of the newly-released land, it would be helpful to establish a Green Development Corporation (GDC) for each city region with full planning powers over the newly-released land and powers to spend the revenues from the proposed Land Development Charge for the designated purposes. The GDCs could not only ensure speedy development but also co-ordinate that development so that there was a coherent pattern of development for all the land in each region: not just station by station.

The London Docklands Development Corporation (LDDC) provides a good and successful example of how this can be achieved although it is not proposed that the GDCs – unlike the LDDC – should acquire the land for themselves, except that to be used for public or social purposes including the 10 per cent of the total area of buildable land reserved for new, public green space. As with the LDDC, the lifespans of the GDCs should be time limited after which their planning powers revert to the relevant local authorities.

As with any Urban Development Corporations, central government would need to establish the GDCs under the auspices of the Ministry of Housing, Communities and Local Government. They could either be autonomous public corporations with their governing bodies nominated using the normal procedures; or there could be some guaranteed representation of those local authorities within the boundaries of which the buildable land was located. If that were decided on, then representation of local authorities could reflect how much of their land was being scheduled for development in each city region. However, once their governing bodies were constituted, the GDCs would be responsible for proactively working with both the relevant local authorities and the rail company's development arms to agree planning guidelines for the land and ensure the development was rail focused with provision for cycle routes to the stations and cycle storage at them.

The proposal is, then, to identify all the land within 800m of commuter stations to major cities that has no social, environmental, amenity or topographical reason for not being developed except that it is either designated as Green Belt or currently used for intensive agriculture. Commuter stations would have to have a service to the employment centre of 45 minutes or fewer. The amount of land that would be released for housing – even ensuring that 10 per cent of the total was reserved for new, accessible green space and just for the five city regions examined here – is enough to build between 1.7 million and 2.1 million new homes on: about the number of homes built in the whole of England over the past 15 years. Still, because Green Belts cover such a vast area of land in total, some 1,630,000 hectares or nearly 1.4 times the area of all existing development, this would cover only 1.8 per cent of the existing area of Green Belt.

New developments would be compact with a focus on rail transport and cycling not just because of how it would be planned, but also because the owners of the stations would be ultimately the beneficiaries of this type of development. The proposal sets up a strong, inbuilt incentive to maximise the use of stations and rail.

To ensure that there was substantial public benefit from this (apart, of course, from all those extra houses in rail and cycle-based developments, in places giving easy access to jobs) the increase in land values would be used to:

1. Fund more and better local infrastructure for the local communities affected by the new development and more social housing
2. Provide a funding stream to replace all or most of the existing subsidies to commuter rail

Two new innovations would make this possible. The first would be to introduce a Land Development Charge set at 20 per cent of the realised sale price of all development. The second would be to gift the sole rights to develop the newly-buildable land to new commercial development arms set up and owned by the current owners of the relevant stations – Metrolink, National Rail or Transport for London, for example. Since these new development arms of the station owners would have the sole right to develop the land, they would be the only entities able to pay above its existing use value. So they would be able to buy all the land at a reasonable mark-up over farmland prices. It might still be necessary to keep compulsory purchase powers in the background. Overseeing all this for each city region would be a special purpose GDC, modelled on the successful LDDC. The role of the GDC would be to ensure the development was co-ordinated and maintained high environmental standards and reserved plentiful land for additional green open space. Like the LDDC, the GDCs should have limited life-spans with their planning powers reverting to the relevant local authorities at the end of the agreed period. They would be required to co-ordinate closely with both the local authorities within the boundaries of which the new development was located, and with the rail development companies.

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