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Banking on brownfield

Can previously-developed land supply enough homes where they are needed?



LICHFIELDS



Executive Summary

The Levelling up White Paper, 2021 Conservative Party Conference speeches and the £1.5bn Brownfield housing fund have all suggested brownfield land as the solution to meeting the country's housing needs.

This report considers whether brownfield land is sufficient in size, in location and in its deliverability, to perform that role.

We have analysed all local authority Brownfield Registers. We find that, even if every identified site was built to its full capacity, the capacity of previously-developed land equates to 1,400,000 net dwellings. This equates to just under a third (31%) of the 4.5m homes that are needed over the next fifteen years. Even with significant government support, brownfield land can only be part of the solution to the housing crisis. Further, brownfield land is not evenly distributed, and not well aligned to current demand for new homes.

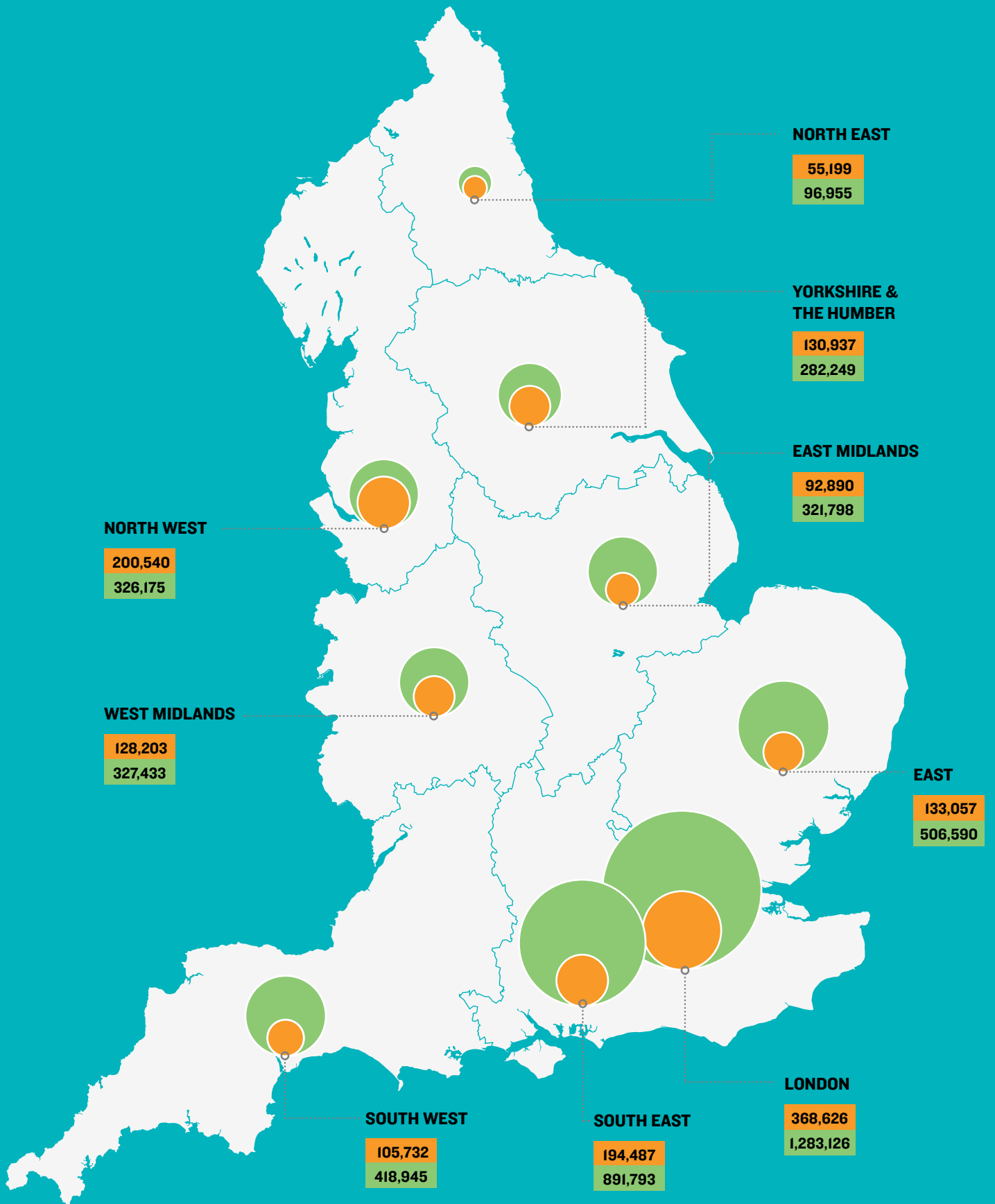
There is less brownfield land available in the places with the highest demand for new homes. The three regions where brownfield land is most relatively prevalent (North West, Yorkshire and the Humber and North East), are those where the price of homes is more closely aligned to average incomes.

Even in these regions, the capacity on registers is less than the current level of housing need. If 'levelling up' achieves economic re-balancing and drives higher levels of housing need, the gap between capacity of previously-developed land and homes needed will grow. Further, the type of homes that might be built on brownfield sites do not always match local housing needs and aspirations.

The capacity of land on the Brownfield Register is expected to deliver many sites at high densities, leaving little space for new family homes with gardens. 48% of the homes on proposed sites on the register are likely to be apartments (sites of over 100dpa) whereas just 17% of households across the country are likely to live in apartments. This means there is a ratio of one new brownfield home to every six households likely to live in apartments but one to 27 for houses. This mismatch can be even more striking at the local level.

The competition for urban land is ever present, markedly between economic and residential uses. Our research finds the opportunity cost of prioritising brownfield land for housing rather than employment is significant in pricing out industrial and office development to potentially sub-optimal locations. Redevelopment for many employment uses requires less remediation work than for residential land. Additionally, the greater the premium for residential over industrial land, the more significant the challenges are to effectively sustain both jobs growth and housing growth. There is proportionately more brownfield land in markets that have greater viability risks but this is affected by geography. Three quarters of the residential capacity of the register in the North East are in local authorities most at risk of viability issues, whereas none in the South East or South West is. This can also lead to a trade-off between delivering homes on brownfield land and providing subsidised and affordable housing; the additional cost and risk of developing brownfield land makes delivering affordable housing more challenging on those sites.

Our research also finds brownfield land data to be lacking in the comprehensiveness, accuracy and detail required to make effective policy decisions. The data in the Brownfield Registers is often out of date and suffers from the apparent inclusion of a large number of duplicates and/or overlapping entries. Throughout our study we refer to the figures on the Brownfield Registers that have been 'cleaned' of duplicates, our method is described in section 2. For all stakeholders, better information is required to improve decision making and ensure that plan-makers base their strategies on accurate information.



Report in figures

1.4m

estimated net housing capacity on Brownfield Registers

23,500

number of individual site entries on Brownfield Registers

31%

net brownfield capacity as a proportion of amount of housing needed over next 15 years

48%

of homes on Brownfield Registers estimated to be flats; compared with 17% of households likely to live in flats

1 to 27

there is a ratio of one new brownfield house (as opposed to flats) to every 27 households likely to live in houses

57%

of brownfield capacity outside the Greater South East is within the two least viable quintiles (20%) of LPA areas (compared with less than 3% of those in GSE)

68%

of the HMAs with more brownfield capacity (relative to their housing need) are already more affordable than average

132,000

net housing additions in England in 2001 when 'brownfield first' was the dominant national housing supply policy objective (compared with 234,000 p.a. on average over last three years)

Introduction

To what extent is brownfield land the solution to meeting the country's housing needs?

The Prime Minister's 2021 autumn Conservative party conference speech included the passage:



You can see how much room there is to build the homes that young families need in this country, not on green fields, not just jammed in the South East, but beautiful homes on brownfield sites in places where homes make sense.

The ensuing media coverage included the Telegraph front page headline *"PM pledges no homes on green fields"*, although the Government has subsequently clarified that it had not changed policy or introduced a moratorium on greenfield development.

The ongoing debate about the course of planning reform, the 'levelling up' agenda, and speculation about future changes to the Government's Standard Method for local housing need have coalesced around a clear sense that Government wants to *"go further and faster"*¹ on brownfield development. The Minister for Housing told the House of Lords select committee that *"a focus on brownfield development is a way of making sure that we meet our 300,000 homes per year target by 2025... we will focus on brownfield and provide the toolkits to local authorities to remediate brownfield sites"*.²

¹(Then Housing Minister) Rt Hon Christopher Pincher MP, November 2021 quoted in <https://www.planningresource.co.uk/article/1734023/pincher-government-will-go-further-faster-brownfield-development-coming-months>

² Built Environment Committee Meeting housing demand 1st Report of Session 2021-22. HL Paper 132. January 2022

³ DLUHC 2022 Levelling Up the United Kingdom <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom>

Indeed, the Levelling Up White Paper³ goes further, presenting it as a means of redistributing growth and a stark choice between green fields and brownfield; *"by extending opportunity across the UK we can relieve pressures on public services, housing and green fields in the South East"*.

But how much brownfield land is there? Is there enough of it to meet the needs of 300,000 homes per annum, and is it in the kinds of places where those homes most need to be built?

This report – prepared by Lichfields for the Land Promoters and Developers Federation (LPDF) – addresses these questions, unpacking some of the data on brownfield land availability from local authority-prepared Brownfield Registers to help shape a better understanding of this important policy area.



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03 Our approach

Under the Town and Country Planning (Brownfield Land Register) Regulations 2017, all local authorities are required to prepare, maintain and publish registers of previously developed (or brownfield) land. Registers must be reviewed at least once a year and must include all land that the local authority considers to be suitable, available and achievable for residential development at some point in the next fifteen years.

We have carried out an analysis of Brownfield Registers across England. Our review finds they remain an imperfect record of brownfield capacity. Brownfield Registers are an infamously ‘messy’⁴ catalogue of sites, but it remains the best locally-generated record of potential brownfield capacity currently available – both for policy making and for research.

The Regulations set out that registers should only include sites if they are considered ‘achievable’⁵, but our review identified examples where local authorities included sites where their own notes suggested residential development was not realistic.

It is also the case that inclusion of land on a Register is not subject to consultation or independent scrutiny to establish whether the sites meet the statutory criteria.

Our analysis of the registers also found considerable levels of duplication – brownfield sites that were included more than once on registers. The reasons for this appeared to vary from simple data entry error, to mismatched references, to alternative schemes/applications proposed for the same land both being entered at different times.

To ‘clean’ the data we have taken duplications out where they share the same address and the same area size; additionally, we have manually sifted for other clear duplications. Using this method, we remove c.1000 records amounting to c.58,000 units from the maximum net figure of new dwellings. Our approach to this has been ‘generous’ in favour of the register, removing only the clearest of duplications; there are almost certainly more. Our total, 1.4m units is higher than the data used by CPRE in their analysis from 2021⁶.

Having established brownfield land capacity on registers, we then look at:

Is the capacity located in areas where housing is most needed?

We have approached this question by looking at:

- a) the Government’s standard method for assessing Local Housing Need: the standard method calculates local housing need at the local authority level which we have summed to Housing Market Areas and regions to reflect the geography of need vs supply.
- b) affordability ratios (the balance of house prices and incomes) to identify the areas where homes are least affordable to those on median incomes.
- c) an alternative ‘standard method’ for housing need based on the recent Building Back Britain Commission which put forward a ‘levelling-up’ based approach to housing need.

In comparing brownfield capacity to housing need, we have looked at a 15-year period. This reflects the time period for inclusion on Brownfield Registers and is also the minimum plan period for any local plan under the NPPF.

⁴ <https://digital-land.github.io/weeknote/2020-02-07/>

⁵ ‘Achievable’ is defined in The Town and Country Planning (Brownfield Land Register) Regulations 2017 No. 403 Regulation 4 Paragraph 2: “Achievable” in relation to residential development of any land means that, in the opinion of the local planning authority, the development is likely to take place within 15 years of the entry date.

⁶ CPRE, 2021, Recycling our land <https://www.cpre.org.uk/news/new-research-shows-recycled-brownfield-land-being-ignored/>

Are there areas where identified brownfield capacity is less likely to be viable?

We use a 'high level' proxy approach which aims to identify the spatial pattern of viability risk rather than attempting to appraise the feasibility of each site. We use ONS data on residential land value calculated by area.

We then add BCIS construction cost data to give guidance on what development would cost without any remediation, change of use or extra costs. We then compare this outline cost with ONS house prices data calculated per square metre.

We then categorise local authorities into those where brownfield development is more or less likely to be at risk of viability problems.



To answer the question “*is there enough brownfield land to justify a brownfield only approach to development*” we have considered a suite of questions before concluding with policy recommendations:

- a) Is there enough brownfield land?
- b) Is the brownfield capacity in the right places?
- c) What types of homes might be built on these sites?
- d) Are the brownfield sites viable for development?

Brownfield Registers are intended to provide a perspective on capacity looking ahead 15 years, but it is acknowledged that by its nature there is a certain amount of turnover of brownfield land, with new sites coming forward over time.

However, this report uses the snapshot of what is available for development at this time in part due to the practicalities of data availability, but also reflecting development horizons, whereby it typically takes a site years (often, many years) from being identified as having potential for development to yield new homes capable of occupation.

It is notable that a significant number of the entries (and a higher proportion of potential homes) on the Brownfield Register are for sites which have had multiple attempts to develop them over time.

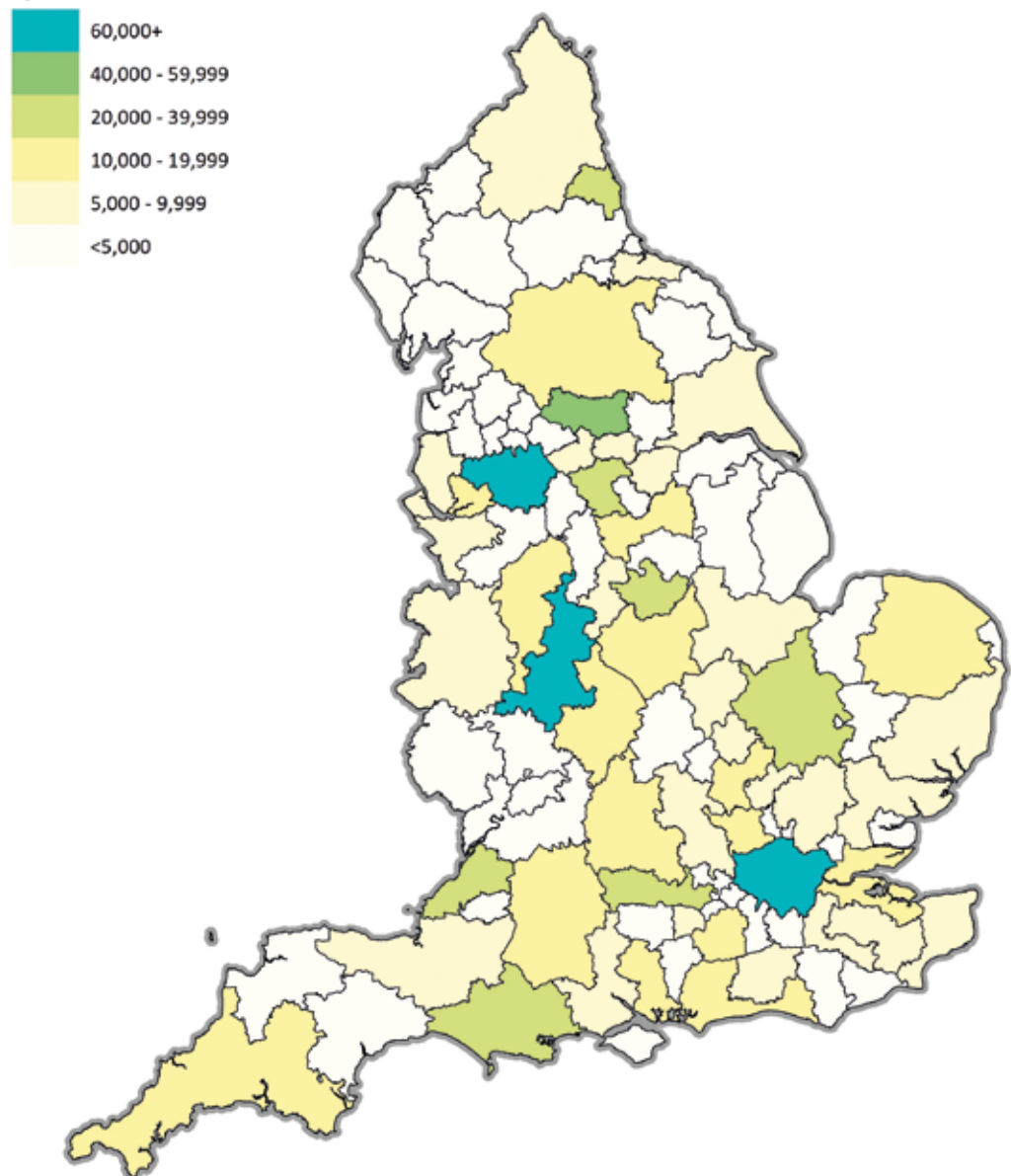
04 Enough land in the right places?

Is there enough brownfield land?

According to our analysis, the maximum housing capacity of building out all sites on the Brownfield Register amounts to 1,400,000 net dwellings. Housing need in England amounts to just under 300,000 homes per annum (based on the Standard Method) and this remains the Government's stated ambition for housing supply. The available brownfield capacity on registers – if all deliverable and built to its

maximum capacity – would therefore equate to just under a third (31%) of that figure over fifteen years. In reality, not only will all sites not come forward in the quickest possible time, there are sites on the Brownfield Registers that are not up to date or accurate in their estimated capacity, indeed analysis by CPRE found a lower capacity of 1.1m potential homes. Figure 4.1 shows the geographical distribution of the brownfield land capacity by housing market area⁷.

Figure 4.1 Brownfield land capacity for new homes by Housing Market Area



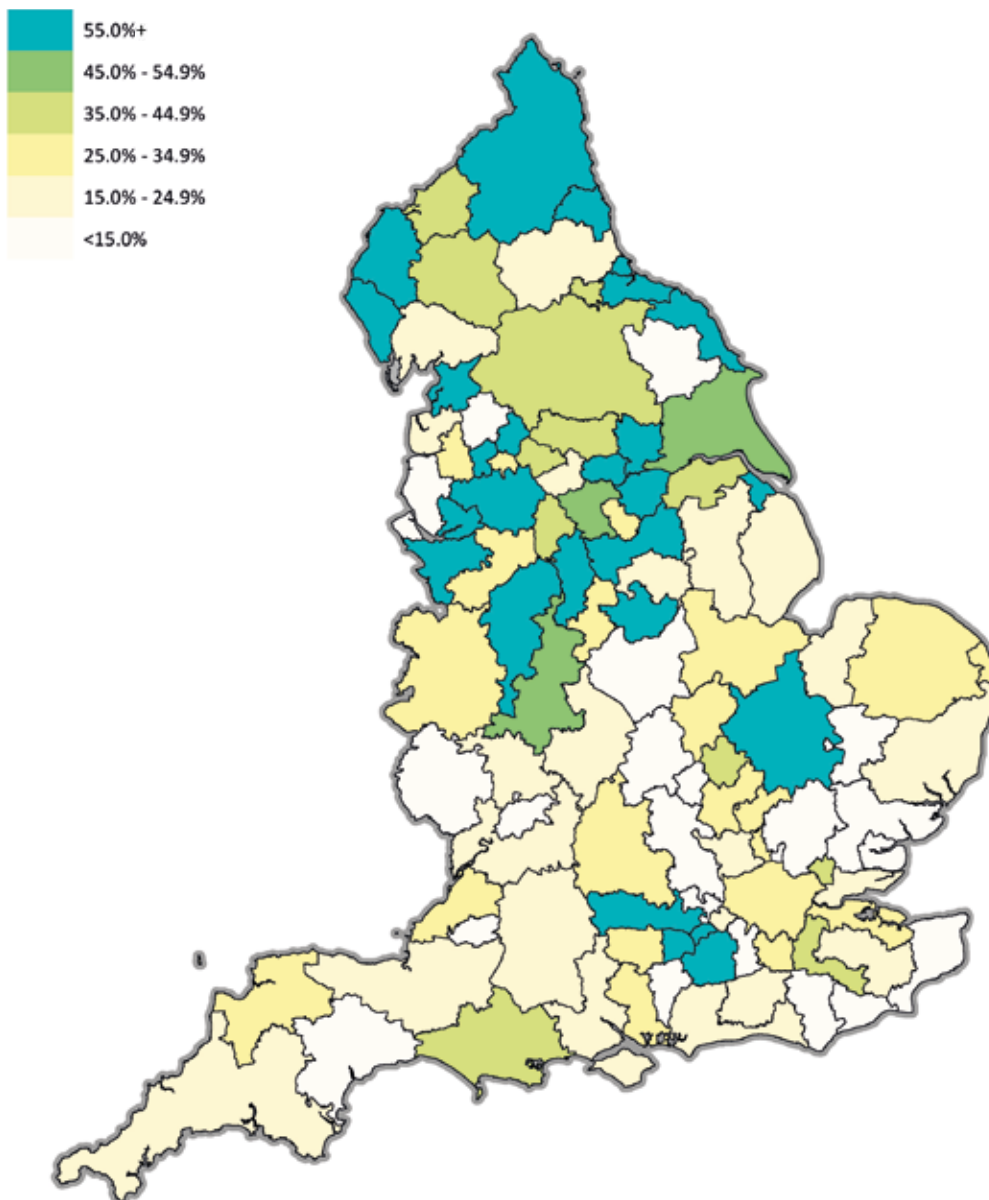
⁷ Groups of local authorities that share local household demand and preferences

Is the brownfield capacity in the right places?

By mapping this same capacity but as a share of local housing need based on the Standard Method, the spatial pattern becomes clear (See Figure 4.2). Quite clearly, there is less previously developed land for housing in much of the south of the country, where housing need is greater.

There is much more brownfield capacity for development in areas with less housing need and lower demand, although in no Housing Market Area is there sufficient to even come close to meeting housing need in full.

Figure 4.2 Brownfield land capacity as a share of Local Housing Need, Housing Market Areas

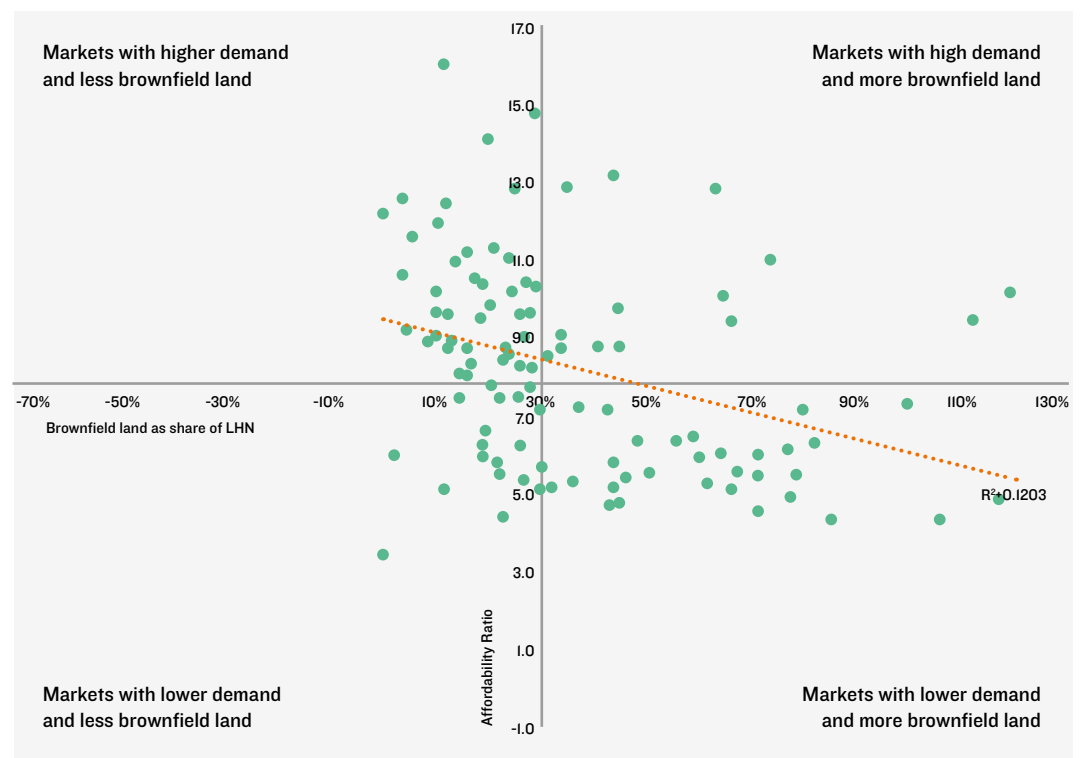


Source: Lichfields analysis of Brownfield Register 2021 DLUHC

04 Enough land in the right places?

In fact, Figure 4.3 shows that there is a negative correlation between problems of affordability and brownfield land capacity, i.e. there is more brownfield land (in relation to local need) in more affordable HMAs than average. More than two thirds of the Housing Market Areas that have proportionately more brownfield land (as a share of local housing need) are also already more affordable (i.e. have a lower housing affordability ratio than for England). The policy implications of this are discussed later in this report.

Figure 4.3 Affordability versus brownfield land as a share of LHN by Housing Market Area



Source: Lichfields analysis

The three regions with the highest proportion of brownfield land against local housing need (North West, Yorkshire and the Humber and North East), are also the three regions with the lowest affordability ratios (i.e. the most affordable for those on median incomes). Even in these regions, brownfield land capacity – even if built out completely – could only account for less than two thirds of need over this period.

In contrast, the four least affordable regions all have brownfield capacity that is less than 30% of the land required to meet their local housing need. This means that for the least affordable areas with the highest housing need; brownfield land offers the lowest capacity with regards to their needs. Perhaps unsurprisingly, this is particularly an issue in the South East and South West of England, where high levels of need and demand are not matched with significant levels of brownfield land opportunities.

Whilst brownfield land is often suggested as the solution for housing, it is important to avoid seeing this as simply a numbers game, and recognise important economic and housing market factors. For example, much brownfield land may be equally - if not better - suited for industrial and employment uses, and indeed more viable for development as such in some key locations. If creating better jobs is a positive strand of levelling-up, the role of brownfield land in supporting that objective should not be overlooked. Similarly, if brownfield land in these areas is prioritised for housing, this need for employment land will need to be accommodated on other sites, most likely greenfield.

The levelling up agenda put forward by the Government also suggests an ambition to build more homes outside of the South East. Attempts to direct new housing to brownfield sites in more affordable regions will not address the availability of housing – including affordable housing – in the housing markets of the South East and South West where many communities struggle to attract and retain young families. Brownfield land in different areas of the country may also require different development models and policy support.

In London, 36% of the housing capacity on the register is on larger sites of more than 1,000 dwellings, compared with less than 16% for all other regions (with the exception of the East of England, 33%). Contrastingly, just 15% of London's capacity is on sites with less than 100 units compared with 35% for the rest of the country. The size profile of sites on the register will likely require different types of policy response, and development to realise their potential.

The larger sites on the Brownfield Register range from estate regeneration projects which require significant specialised resident management skills, to large ex-industrial sites which require remediation works, to large employment sites which might require significant re-organisation of local services and balancing of other land use needs. In short, many of the large sites on the Brownfield Register are 'complicated' due to their existing uses or condition; this in turn can bring viability risks and risks of delays to development. Additionally, there are placemaking challenges to delivering housing on sites that had a different previous use. Alongside remediation costs, many brownfield sites that are identified may not be acceptable in terms of creating quality places to live.

Not all brownfield sites that might technically be developable are best suited for residential development. Some examples we found included:

- 1) One large site on the register which might theoretically accommodate up to 2,000 new homes in the East Midlands acknowledges significant contaminants of heavy metals, petroleum hydrocarbons, PAHs, sulphate, arsenic, cyanide and phenols. Placemaking and remediation work for this type of site is challenging and resource intensive.

The same site has been subject to a number of failed attempts to secure development since 2007. Recently, more than half of the site has now been taken forward as a major distribution, logistics and rail freight hub providing significant employment opportunities which can be accommodated more easily on this land due to differing thresholds of risk.

- 2) One local planning authority in Northern England has four sites which are located within the Inner Zone of the Health and Safety Executive's (HSE) land use planning consultation zones (i.e. are adjacent or nearby to other uses classed as major hazards) accounting for 10% of its homes on the Brownfield Register. These are areas in which risks are significant even after all reasonably practicable preventative measures have been taken during the development due to their proximity to a major hazard. HSE's Land Use Methodology seeks to guide housing and other vulnerable uses away from such locations. Alternative uses, for example, factories would be less sensitive to being built in such locations.

These examples are not to say that such sites may not in the future deliver high quality places to live (though they may be unsuitable for housing development in their current state); however the practical measures to make such sites suitable to provide the type of community in which people would like to live is significantly more challenging than for other uses.

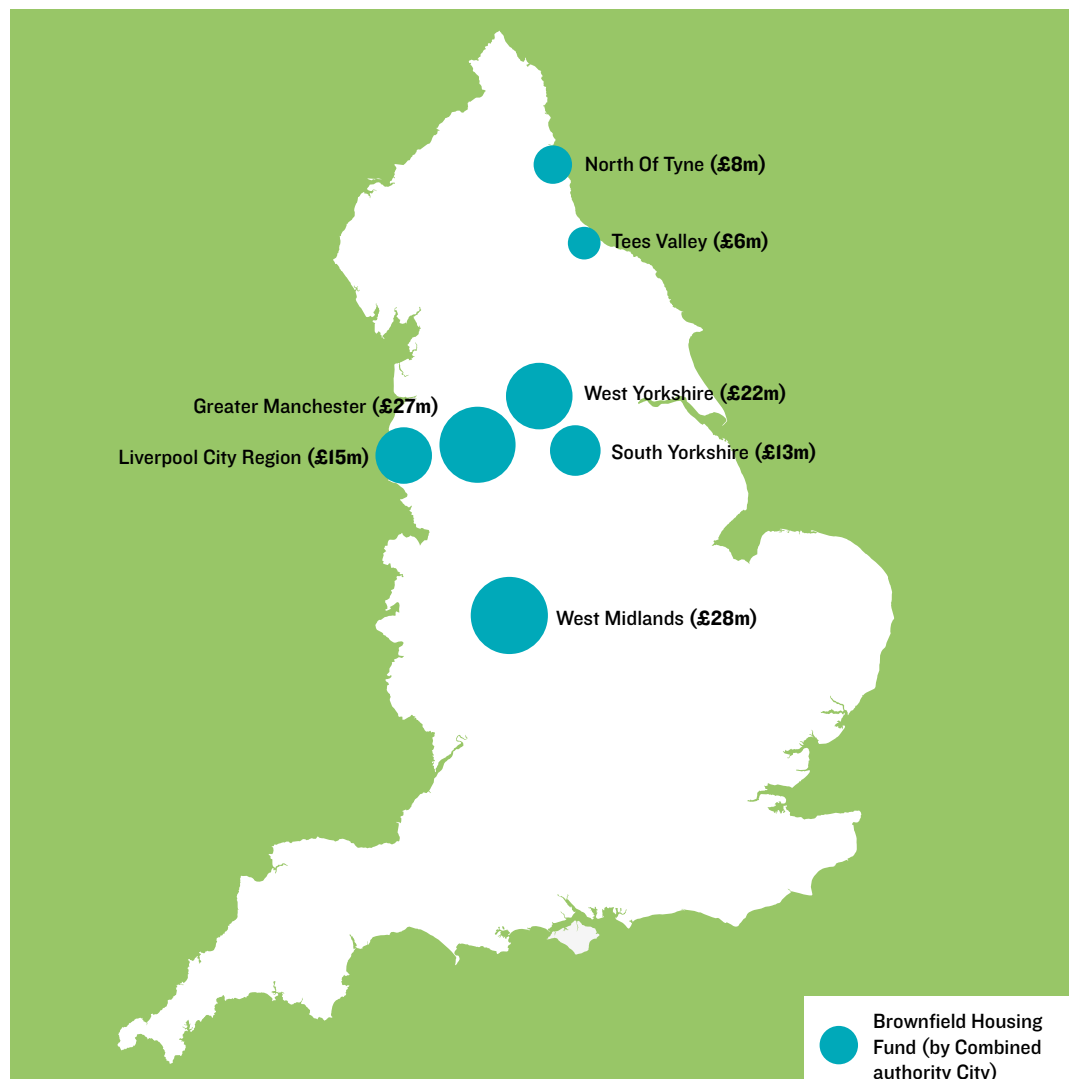
04 Enough land in the right places?

What if housing need is re-calibrated towards 'levelling up' areas?

The Levelling Up White Paper made clear that the Government will direct housing investment as a means to address the economic imbalances across the country. The Secretary of State highlighted⁸ the current 80/20% split of housing funding in favour of the Greater South East – referring to specific Homes England enabling funds – is to be re-directed in support of levelling up.

To do this, there is a commitment that most of the £1.8bn in brownfield land funding will be spent in “the North and Midlands” with 20 cities benefiting from a new regeneration programme. The latest £120m round of the Brownfield Housing Fund (Figure 4.4) has been allocated to seven Mayoral Combined Authorities all in the North and Midlands, to be followed by a further £180m to be available for locally led brownfield projects.

Figure 4.4 Brownfield Housing Fund (scaled to funding size)



Source: Lichfields analysis

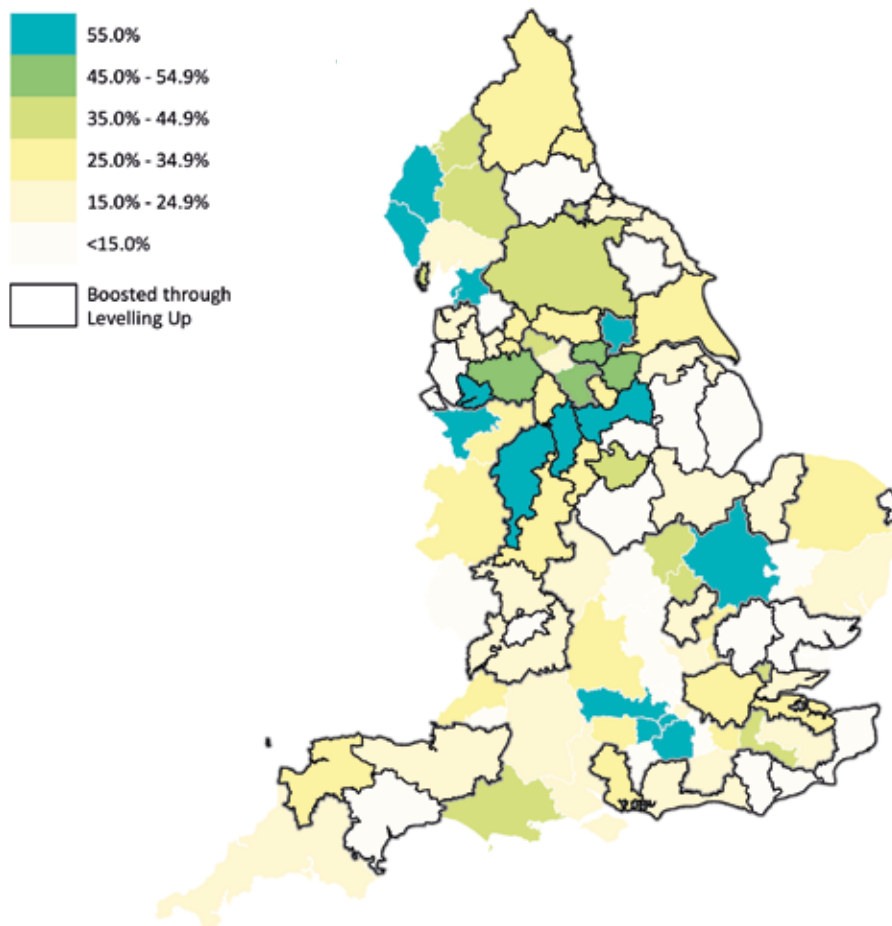
⁸ DLUHC 2022 Levelling Up the United Kingdom <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom>

There is speculation that the Government will change its approach to housing need under the Standard Method to skew growth towards 'levelling-up' areas⁹. How it might do this is not yet known. To explore how such a move might relate to the availability of Brownfield land, we consider the recommendations of the Building Back Britain Commission published in 2021¹⁰ – many of which were supported by the Secretary of State at the time. The paper posited a model forecasting the demand for future homes in areas expected to benefit from jobs growth due to the Government's levelling up agenda. The results, mapped in Figure 4.5, show (under the maximum impact scenario) a significant uplift of housing need in local authorities requiring levelling up in order to support future jobs growth - from 73,000 to 118,000 homes a year (assuming a 30 year horizon of levelling up success).

This equates to an additional 44,600 homes a year compared to assessed need under the current Standard Method for those areas. Our analysis reflects the report's data for 90 authorities (three authorities have been consolidated, and there is no data for the Isles of Scilly). This Building Back Britain Commission methodology is only one suggestion of how any revised standard method for calculating local housing need might look; the actual method will be different.

The proposed method of assessing housing need does show higher rates of need in many of the housing market areas with the highest level of brownfield land. However across all of these areas, local housing need is already in excess of the brownfield capacity as measured by the Standard Method. Therefore there are no housing market areas where the current standard method is acting as a ceiling on realising the potential of brownfield land.

Figure 4.5 Brownfield land as share of 'levelled up' need, summed to Housing Market Areas



Source: Lichfields analysis of DLUHC and Building Back Britain Commission

⁹ The Times, November 5 2021, New planning formula would see more houses in the north. <https://www.thetimes.co.uk/article/new-planning-formula-would-see-more-houses-in-the-north-q56w0dndq>

¹⁰ Building Back Britain Commission 2021, Levelling up and the housing challenge

05 Land for the right types of homes?

This Government has prioritised liveability and quality of place in its housing policy, and it is notable that the report it commissioned *Living With Beauty* from the Building Better Building Beautiful Commission¹¹ highlighted that overly dense ‘small flats in big blocks’ (on brownfield sites) as an example of “*the wrong development in the wrong place*”.

Understanding whether houses and apartments are in ‘the right place’ is clearly a matter of planning judgement. Each Local Planning Authority is obligated to perform its own detailed housing need assessments which looks at the needs of its current and future residents to identify the different sizes and types of homes required. It is clear from previous Lichfields research¹² that the demand for different types of homes has also been affected by the pandemic and resulting change in remote working patterns.

Using these ‘high-level’ estimations on the density of sites on the Brownfield Register and household classifications, 48% of the homes on proposed sites on the register are likely to be apartments (sites of over 100dph) whereas just 17% of households across the country are likely to live in apartments. This suggests the brownfield land capacity is associated with a form of development that is not aligned to current demand. Effectively, there is a ratio of one apartment on the Brownfield Register for every six households likely to live in apartments but one house for every 27 households likely to live in houses.

At a national level, the latest English Housing Survey found that just 19% of the existing housing stock is made up by purpose built flats. This suggests the type of home coming through the Brownfield Registers is much more likely to be an apartment or flat than for the current market.

To understand at a broad level if the type of homes that might be built on brownfield land fits with the local need, we give a broad overview of the:

- 1) Existing demand for apartments or houses in each housing market. The number of households in each housing market area that are likely to be living in apartments or houses is calculated by using Experian MOSAIC data¹³. This helps us to understand the current make up of areas and gives a high-level comparative indication of the demand for each type of development.
- 2) Potential supply of apartments and houses on brownfield land. We use a threshold of 100dph¹⁴ to estimate whether a development proposed on the Brownfield Register is likely to be mainly houses (densities of up to 100dph) or more likely to be mainly flats or apartments (over 100dph).

Our analysis also finds significant variation in the type of site coming forward in different areas. Unsurprisingly, four fifths of developments in London on the register are listed at a density typical of apartments rather than houses, whereas the inverse is true in the North East.

Figure 5.1 maps the ratios of number of homes coming forward in each area compared with households in that potential market – either apartments or houses. For four fifths of Housing Market Areas (85/106), the ratio of number of apartments to households likely to live in apartments was higher than the equivalent for houses. This suggests that there are likely considerably more flats and apartments coming forward on this land (if developed) than houses in comparison with their respective markets. Policy implications are discussed later in this report, but the analysis suggests a mismatch between the type of homes that can be delivered on brownfield sites compared with household needs and demands in their respective market areas.

¹¹ Building Better Building Beautiful Commission, 2020, *Living with Beauty*

¹² Working From Home, Planning for the New Normal <https://lichfields.uk/content/insights/working-from-home/>

¹³ MOSAIC data uses 66 household classifications which includes whether the household is typically living in a flat or a house. For each local authority, an estimate of the number of households in each of these classifications is given.

¹⁴ We have used a threshold of 100 dwellings per hectare as a simplified measure of whether new homes are more likely to be predominated by lower density houses or higher density apartments.

Figure 5.1 Ratio of number of households likely to live in houses to number of houses on Brownfield Register (by HMA). A higher ratio signifies more households to each home on the register.

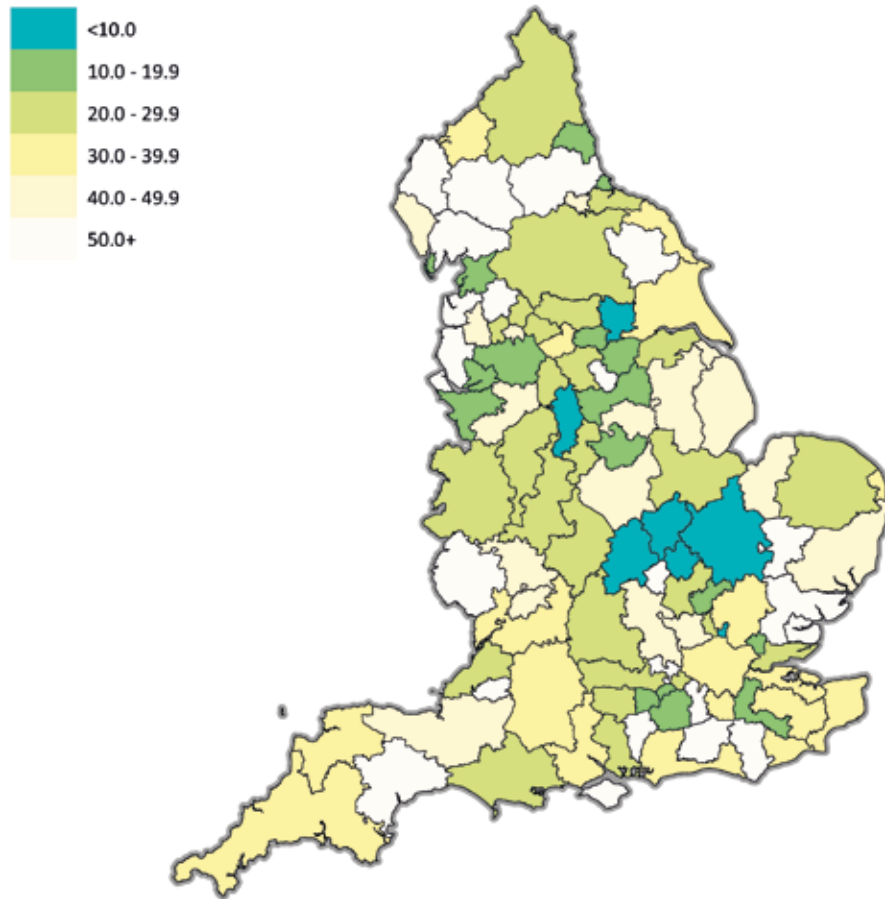
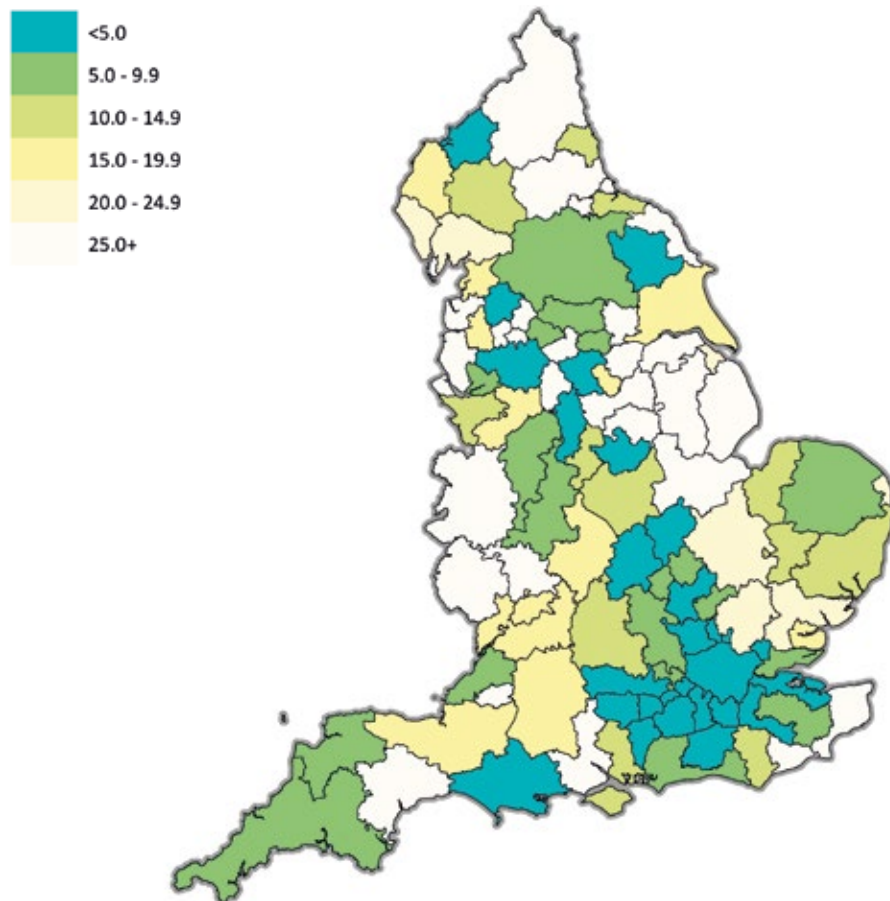


Figure 5.2 Ratio of number of households likely to live in apartments to number of apartments on Brownfield Register (by HMA). A higher ratio signifies more households to each home on the register.



06

Is brownfield land viable for development?

For brownfield land to make a meaningful contribution to meeting housing needs, it must be viable for development and located where there is a market for the homes that could be built there. A characteristic of brownfield development is the need to deal with the legacy of existing or previous uses on the site, often requiring remediation.

Placemaking investment – to create an environment where people will want to live – is often a significant cost. The recent extra challenge of achieving biodiversity net gain also provides an extra variable for brownfield urban sites in comparison to greenfield sites where calculations are typically more straightforward. Recent analysis shows that the economics of remediation could change radically over the next ten years due to biodiversity net gain¹⁵. This is another consideration when analysing the Brownfield Register; some of these sites may become unviable for housing but could be suitable for biodiversity off-setting providing net gains for urban areas (e.g. new urban parks and nature reserves). This not only changes the equation about ‘what is developable’ but also changes the risk and cost profile for potential development.

All of this tends to mean that, on a cost per square metre basis, brownfield development will typically cost more to build than on greenfield sites. Certain locations have strong markets where viability challenges are likely to be overcome, but in other locations, even small abnormal costs can render a scheme unviable without targeted government support.

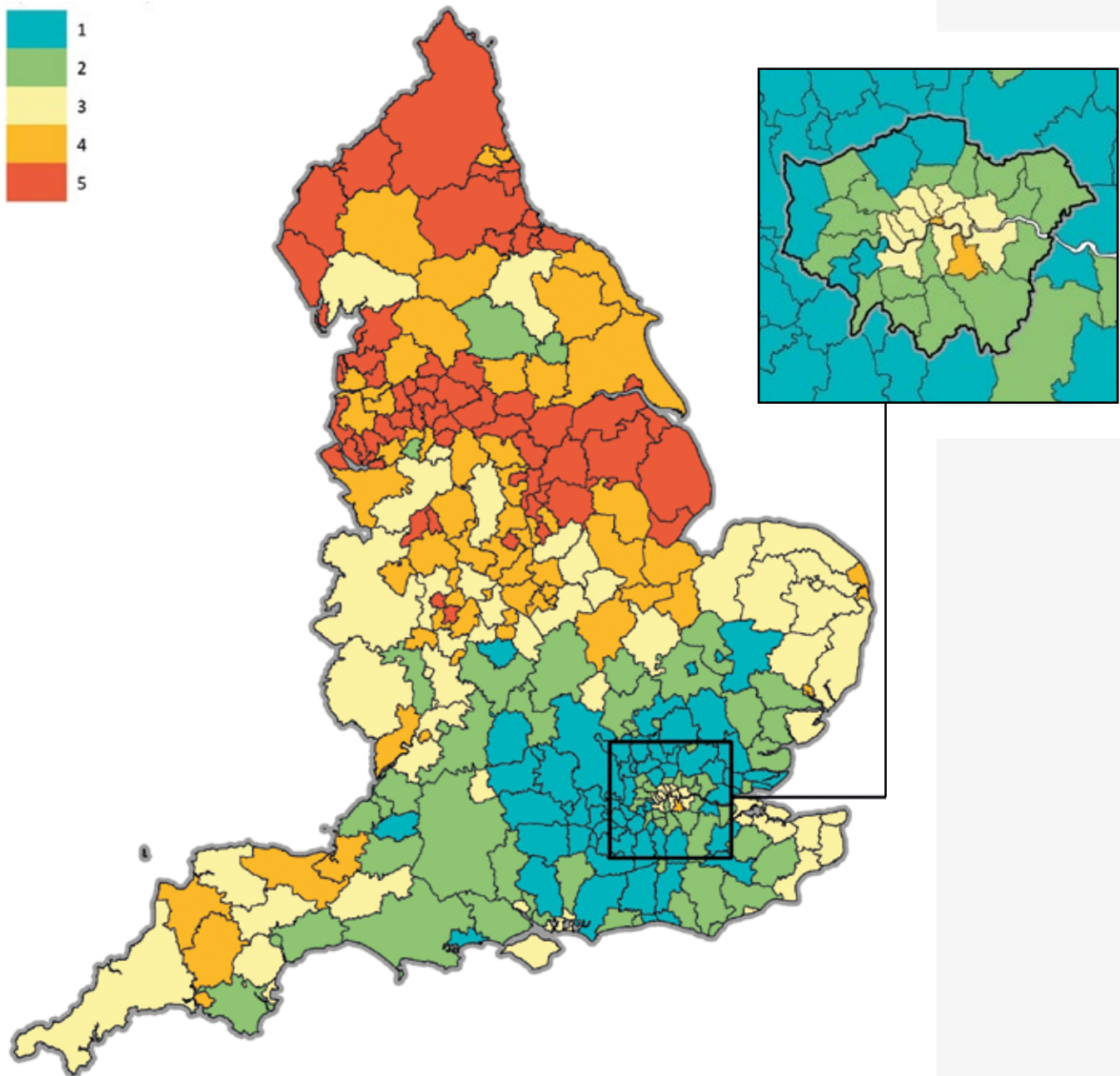
This includes sites which might fit the commonly-held archetype of brownfield land. One typical example we found within the Brownfield Register is a site for 320 homes comprising vacant and cleared ex-industrial land in the North East of England. The redevelopment of the site is supported in principle by the Local Planning Authority.

However, the complexity of delivery is clear in its planning history; an initial outline planning permission for a comprehensive mixed-use redevelopment was first granted 14 years ago, yet the development is noted as not currently deliverable. The entry in the Brownfield Register identifies the locational and remediation challenges and costs which are common with these schemes and make them inherently complex to deliver. It is not to say that this is undevelopable, but it does show some of the risks in calculating whether an entry should be considered developable and therefore entered on the Brownfield Register.

To understand the scale of the challenge we use a ‘high level’ proxy approach which captures the overall pattern of viability risk. We use the ONS residential land value, BCIS construction cost and compare with ONS house prices data, all calculated per square metre as a guidance of the ratio of development costs to house prices. We then rank and categorise (by quintile) local authorities into those which might be more or less at risk of viability issues.

¹⁵ Environment Analyst UK, November 2021 Biodiversity net gain could shake up the remediation market <https://environment-analyst.com/uk/107486/biodiversity-net-gain-could-shake-up-the-remediation-market>

Figure 6.I Viability risk of brownfield and development (5 most at risk)



Source: Lichfields analysis of ONS, BCIS data

06

Is brownfield land viable for development?

The spatial pattern (Figure 6.1) is clear as to where viability is a greater risk. This pattern correlates with where there are larger amounts of brownfield land on the register when measured relative to local housing need.

Ten of the twelve authorities in the North East have the highest risk to viability of brownfield sites; this is largely due to the lower house prices (there is less variation in regional construction costs). No authorities in the South East, London or South West are in the most at-risk quartile.

Given the high house prices and high land values in London, East, South East, South West most of these authorities are in the 'mid risk categories'.

Authorities in London, the East and South East have lower risk of viability issues, although of course there will be schemes or sites in many areas that might prove to be unviable for specific reasons, just as there will be brownfield sites in higher risk areas that prove to be viable.

In terms of the share of homes that are in local authorities that have higher viability risk, the pattern is similar.

The regions with fewest units at risk are the South East and the East, whereas the North East, Yorkshire and the Humber, and the East Midlands all have significant numbers of units in the riskier quartiles.

Table 6.1 Share of units that are in local authorities with higher viability risk by quintile (5 most at risk)

	1	2	3	4	5
North East	0%	0%	0%	28%	72%
North West	0%	2%	4%	61%	34%
Yorkshire and The Humber	0%	7%	0%	52%	40%
East Midlands	0%	1%	8%	43%	48%
West Midlands	2%	2%	13%	59%	24%
East	34%	44%	16%	6%	0%
London	13%	46%	37%	3%	0%
South East	62%	21%	17%	0%	0%
South West	23%	41%	19%	18%	0%
ENGLAND	17%	23%	17%	25%	17%

Source: Lichfields analysis of ONS, BCIS data



Case study: Large sites in Barnet

On paper, Barnet appears well placed to meet much of its housing needs on brownfield land; of 67,000 homes needed over fifteen years for the area to meet its need, there is brownfield land with the capacity for over half of this (38,124).

However, digging into the data a bit deeper it is not quite so clear. Almost two thirds of the brownfield capacity on the register in Barnet is accounted for by just seven sites. Four of these seven are estate regeneration projects, the remaining three are current or former employment sites, and all seven already have planning permission (either outline or full).

Taken at face value and taking in to account build out rates, if all these large sites were constructed at full capacity from tomorrow and then at the average rate for large sites for all of the fifteen years, it would provide 16,800 homes over fifteen years, less than half the headline deliverable figure.

Estate regeneration projects are also inherently complex¹⁶ and are typically phased. Together, this brings challenges for registering the data accurately. For example, although almost 4,000 net dwellings are registered for the West Hendon estate in the register under different planning applications, this appears to include some duplication, as well as referring to total new homes in the project rather than net new homes (i.e. additional homes). Indeed, separate research shows that 2,194 new homes are to be built on site, amounting to just 1,550 net new homes, moreover, more than 800 of these homes have already been delivered.

This is not to say that brownfield sites cannot provide significant numbers of homes in Barnet, rather that each site is likely to go through significant planning and pre-development phases before construction starts and that the data in the register is not as clear as might be expected.

¹⁶ https://lichfields.uk/media/6574/great-estates_planning-for-estate-regeneration-in-london.pdf

07 Is housing on brownfield land an opportunity cost?

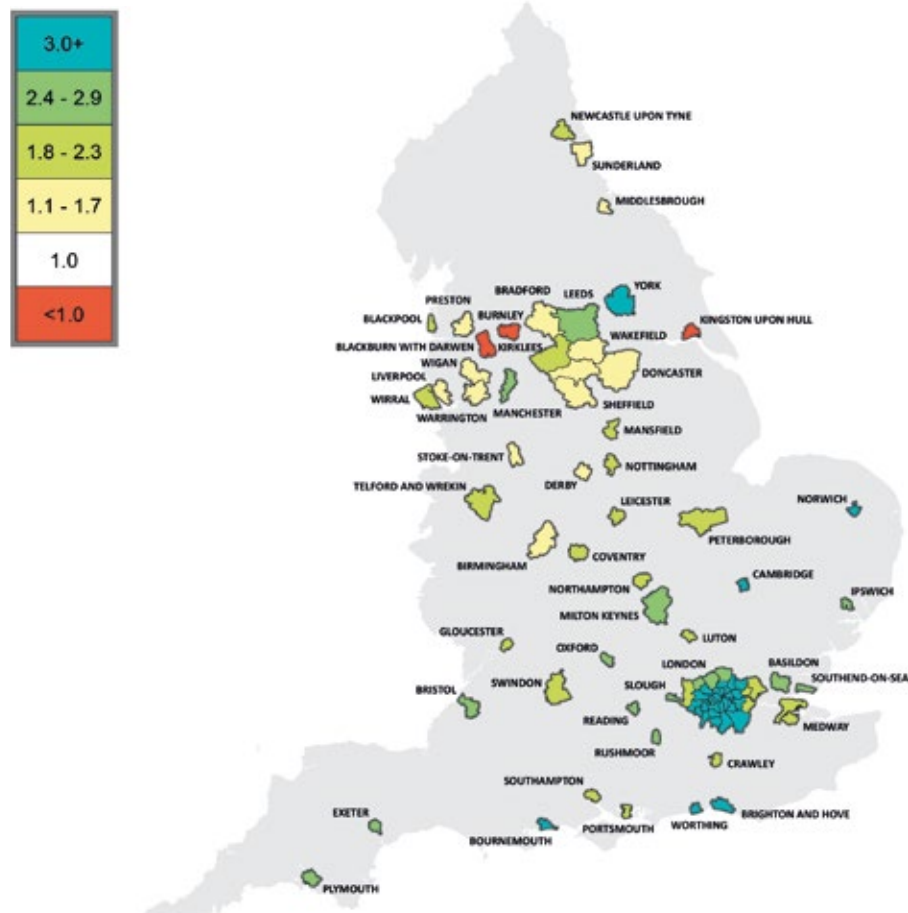
Due to the scarcity of developable land in urban areas, most notably in economically successful cities, the opportunity cost of prioritising brownfield land for housing rather than employment land should also be considered in local plans. Competition for land can be intense, especially in urban areas where greenfield opportunities are constrained. Therefore, policies that prioritise brownfield sites for housing (and restrict alternatives to brownfield land) can push land values up and make alternative uses for urban brownfield site uncompetitive.

Figure 7.1 illustrates the relative difference in value between competing land uses across English cities using a ratio of residential to industrial land values (adjusted to reflect planning obligations and remediation costs).

The higher the ratio, the greater the premium for residential over industrial land. The map indicates that for almost all cities residential land values, even given planning obligations and remediation costs, are typically higher than for industrial use. Unsurprisingly the areas where housing is least affordable are where the ratio is highest, but these are also typically the more economically productive parts of the country as well.

Interestingly, however, the ratio of residential to industrial land costs is less than 1.7 in many urban areas in the midlands and northern regions, indicating that the premium for residential development may not always be sufficient to persuade landowners to release land for residential, given the associated costs of development and the underlying shortage of developable industrial land in those areas.

Figure 7.1 Ratio of residential to industrial land costs



¹⁷ Centre for London 2022, Making Space. <https://www.centreforlondon.org/reader/making-space/>

¹⁸ West Midlands Land Commission (2017) <https://www.wmca.org.uk/media/1412/wmlc-final-report.pdf>

¹⁹ Called-in decision: land west of Wingates Industrial Estate, 21 June 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/995042/210621_Wingates_combined_DL_IR_R_to_C_note.pdf

²⁰ Via a Circular letter on 9 July 2015, a Written Ministerial Statement to the House of Commons on 17 December 2015 and express guidance within the PPG

Source: Lichfields analysis of VOA data, 2019.

But in areas with the higher ratio, where our research has already shown there is less brownfield land compared with local need, residential development will likely outbid employment uses, despite the relatively high productivity potential of jobs there.

The issue of a reduction in employment land in cities has been compounded since the introduction of 'brownfield-first' policies under the 'urban renaissance'. Recent Centre for London research¹⁷ found that over the last 20 years, London lost a quarter (24 per cent) of its industrial floorspace while Greater Manchester and the West Midlands saw theirs decrease by a fifth (20 per cent and 19 per cent respectively).

Work by the West Midlands Land Commission¹⁸ found that: *"the supply of industrial premises servicing the market has been eroded due [inter alia] the redevelopment of old factories and other industrial sites for housing and other uses. This has been largely due to pressure for housing on sustainably located brownfield sites."*

Over this time, policy has shifted with the sequential approach for local plan allocations replacing the more stringent 'brownfield-first' policies. But for many authorities a preference for residential development to take place on brownfield sites remains a strong policy objective.

Pressure on employment land is partly due to the value differential between land for housing and land for other uses. A significant proportion of entries in the Brownfield Register marked as suitable for housing have often been most recently used for employment land, for example industrial uses.

By prioritising residential development on urban brownfield land, potential employment land growth is restricted within cities in the areas to which it is more possible to commute by sustainable modes.

Existing employment uses have in some locations been priced out in favour of meeting housing requirements on brownfield land. This has in turn led to employment land uses relocating to greenfield and Green Belt land.

In some cases, non-residential employment generating uses are considered 'appropriate uses' in these areas (for example waste and recycling facilities) and others adjudged as having the very special circumstances necessary to justify development (for example Wingates Industrial Estate, Bolton¹⁹).

In this context some commentary has pointed to Green Belt release for employment uses being more straightforward than for housing. Whilst the Government went so far as to confirm²⁰ that unmet housing need alone was not likely to represent 'very special circumstances' justifying development in the Green Belt, it did not do likewise for employment or other uses.

Notwithstanding, the implication that all the land on Brownfield Registers will hypothetically go towards meeting housing need will inevitably lead to crowding-out of re-using that land to meet employment (or indeed other community) needs.

This in turn may see sites ideally suited and sustainably located for employment or community uses instead being developed for residential, with those employment and community uses displaced to less suitable locations.

Taken together; the loss of and 'pricing out' of uses other than residential from urban locations has unintended consequences for jobs, for commuting patterns and for the types of homes that are being delivered. Not all brownfield sites are best suited for residential development, and not all new homes need to be on brownfield land.

08 Conclusions and Policy Implications

Regional capacity and viability of brownfield land to meet housing needs across England

We turn to addressing this report's central question: To what extent is brownfield land the solution to meeting the country's housing needs? Table 8.1 shows the full data at a regional level. In summary, brownfield land is part of the solution, but is far from sufficient alone, especially in areas of highest demand.

The capacity of brownfield land (measured by maximum net dwellings), is compared with local housing need (as defined by the current Standard Method) at the regional level over

the same fifteen-year period below. While brownfield land will be an important part of the supply of developable land across all regions, there is not enough *in any region* to meet needs. Additionally, it is concentrated in specific areas which do not typically correlate with the greatest level of housing need.

This mismatch is compounded by factors including viability, demand and the types of homes that can be delivered which are different for each area.

Table 8.1 Summary of findings by Region

Region	Net Dwelling Maximum Brownfield Capacity (Lichfields)	Local Housing Need p.a. (LHN)	15 Year LHN	Brownfield as share of 15 Year LHN	Affordability Ratio	Estimated Flats as share of new dwellings	Share of units in less viable local authorities
North East	55,000	6,000	90,000	61%	5.0	23%	0%
North West	201,000	22,000	330,000	61%	5.8	50%	100%
Yorkshire and The Humber	131,000	19,000	285,000	46%	5.8	39%	94%
East Midlands	93,000	21,000	315,000	30%	6.8	24%	93%
West Midlands	128,000	22,000	330,000	39%	6.8	31%	91%
East	133,000	34,000	510,000	26%	9.4	25%	83%
London	369,000	86,000	1,290,000	29%	11.8	81%	6%
South East	194,000	59,000	885,000	22%	9.9	43%	5%
South West	106,000	28,000	420,000	25%	8.8	38%	0%
England	1,410,000	297,000	4,455,000	31%	7.8	48%	43%

Source: Lichfields analysis 2021

The above figures do not include any discount for factors such as availability or viability which means the real amount of deliverable and developable brownfield land will be much lower than shown



08 Conclusions and Policy Implications

Evidence fit for decision making

The current Brownfield Register provides useful information on the amount of developable brownfield land that currently exists, and each site's capacity for new homes.

However, it also has significant shortcomings when evaluating the quantum of developable land overall. This makes it an unreliable basis for policy makers to decide on the number of homes that can be built in different areas. Significant work is needed on improving data quality if it is to withstand the evidential burden that will be placed upon it if the Government chooses to make brownfield land availability a key part of its new planning reform agenda.

A modest assessment of the Brownfield Register finds significant numbers of duplicate records. Our simple test for duplicates removed around 1,000 sites accounting for 58,000 homes. Many records have no housing capacity listed, some of the largest sites (including a 10,000 unit site in South Cambridgeshire) include both greenfield and brownfield land in their submission, and some have notes which describe them as unsuitable for residential development.

A significant number of these sites are also already partially under construction (around 500 sites nationally, accounting for c.25,800 units have notes on the register that they are currently under construction). Reconciling this to come up with a more accurate national estimate of suitable brownfield land capacity is impractical for this research purpose. Notwithstanding, for all its flaws, it remains a useful database for identifying a broad-brush picture of land availability.

For policy makers at all levels to make effective decisions, investment is needed in a robust Brownfield Register of land that is suitable, available and developable for housing.

It is therefore encouraging to see the importance given in the Levelling Up White Paper to data, monitoring and measurement at a local level. In particular the commitment to:



a transformative data and analysis strategy at the subnational level...increasing incentives to evaluate, monitor and experiment in levelling up policies and programmes. ²¹

²¹DLUHC, 2022 Levelling Up the UK, p150

To effectively transform the current register into a useful resource it needs to learn from the past history of the National Land Use Database (NLUD). Arguably, a further precedent for policy makers would be the urban capacity studies that were prepared under the auspices of Planning Policy Guidance Note 3 (PPG3, 2000).

Urban capacity studies aimed to establish how much additional housing could be accommodated within urban areas and, therefore, by deduction, how much greenfield land may be needed for development. There were issues with urban capacity studies²², primarily the quality of sites proposed were not consistent, with some local planning authorities adding sites which were not developable or desirable for housing.

Furthermore, the assessment of suitability and viability was also often not aligned with the actual market conditions or development industry's calculations.

In combination, the brownfield-first focus that emerged in the late 1990s - leading to PPG3 - led many local planning authorities to significantly over-estimate the brownfield capacity of their areas, and - crucially - the rate at which those sites which could come forward and deliver housing in their areas.

However, the policy architecture of urban capacity studies is informative; without the obligation to gather consistent, accurate and up-to-date data on brownfield capacity, policy makers at national or local levels will not have an effective basis on which to make informed judgements about the strategic approach to meeting housing needs.



²² Oxley, M et al. 2005 Urban residential development, economic viability and urban capacity studies. *Journal of Housing and the Built Environment* (2005) 20: 153–166

08 Conclusions and Policy Implications

Learning from previous brownfield policies

If the Government wants to meet its target of building 300,000 homes each year, no source of land can be 'off the table'. Our analysis in this report shows that there is simply not enough brownfield land in any part of the country to meet housing needs alone.

The re-orientation of housing policy, and Homes England efforts towards brownfield regeneration may help support the conditions where viable and developable land can come forward, but many of these sites will also require grants to unlock them, at greater expense to the taxpayer. Even with this policy support, greenfield land development will still be needed in every region, to meet current housing need.

If the government chooses to shift its planning policy emphasis further towards brownfield, it is useful to reflect on the experience of PPG3 (2000)²³.

Although it was not a 'brownfield-only' planning policy, research at the time found that many local authorities interpreted it as such²⁴. Moreover, the absence of 'deliverability' as a policy criteria for releasing greenfield sites meant that much needed new housing was often held back in favour of brownfield sites that were not capable of being delivered.

As a consequence of this, in the immediate aftermath of PPG3, not enough land came through to be developed for housing. Housing supply plummeted to just 132,000 net additions prompting a recalibration of policy beginning in 2003 with the Barker Review that led to the approach that remains today: one where local authorities are entitled to prefer brownfield land to greenfield when selecting sites for housing development, but alongside a clear requirement for housing trajectories to be based on deliverable and developable sites that have a realistic or reasonable prospect of coming forward.



²³ PPG3 Implementation Study (2003) prepared for Government by Lichfields

²⁴ A commentary on the history of PPG3 (2000) and its implications for housing delivery can be found here: <https://lichfields.uk/blog/2021/october/15/a-brownfield-based-planning-policy-the-lessons-of-ppg3/>

²⁵ DLUHC, 2022 Levelling up White Paper

Levelling up with brownfield

Much of the recent policy discussion on developing brownfield land for housing has sat alongside the debate on 'levelling up'²⁵. House building and government support is seen in this view as unbalanced towards the unaffordable markets of the wider South East. Indeed, the Levelling Up White Paper states that levelling up can “*relieve pressures on public services, housing and green fields in the South East*”.

If the Government did follow the recommendations of The Building Back Britain Commission report, and re-direct its support for house building towards areas that might see higher job growth through levelling up, this would not overcome the fundamental points that:

1. There is not enough brownfield land in any housing market area to meet current housing need, let alone if that need is boosted through 'levelling-up'.
2. The areas of the country where 'levelling-up' might be most desirable, are also those where there is greater viability risk to brownfield development.
3. By positioning housing delivery in 'levelling up' areas instead the most unaffordable areas, price imbalance will continue to rise as supply undershoots in high demand areas.

Any brownfield policy focus would need to be accompanied by targeted and effective funding and not be expected alone to provide the homes that are needed in every area of the country.

Local nuance requires targeted policies

The contribution of brownfield land to housing supply varies considerably between areas.

For housing to come forward on brownfield land in areas of lower demand, efforts will need to be focused on making development viable. This will include measures to address abnormal development costs – for example to cover land remediation and the like. This is particularly the case in the North East, North West and parts of the Midlands.

Another dimension is about enabling developers to find the optimum mix that reflects local demand in each area. This is where there is a potential conflict with the approach of Brownfield Registers. For example, in many housing markets in the north west region, the greater shortage of housing is for larger family homes, particularly within commuting distance of Manchester. However, Brownfield Register data implies that half of the potential units in the region are for apartments.

In London, where the competition for space can be intense and land values high, 36% of the housing capacity on the register is on sites of more than 1,000 dwellings. These large sites (often estate regeneration projects) will take a long time (often more than 15 years), and require significant skills dealing with existing residents and potentially complex land management situations.

Additionally, in locations where both policy and land values converge to drive re-use of land for housing, this will effectively push employment uses (or important community uses) out from sites where they may be particularly suited or have previously supported jobs. Local Planning Authorities will need to consider how they make the best use of brownfield land to meet local economic as well as housing priorities.

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