

# **Brownfield: The Housing Crisis Solved?**



**THE GRACECHURCH GROUP**

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## Summary

All Local Planning Authorities ('LPAs') in England are required to publish a brownfield register by 31 December 2017 and results for the pilot scheme have already been published.

This report examines the pilot studies and compares it to the government's proposed new methodology for calculating housing need. By doing so we can estimate how much of the housing need in the pilot areas can be met through brownfield.

In the pilot registers, brownfield has the potential for 200,000 homes net of normal planning attrition. This is contrasted against a five year housing demand for the pilot LPAs of 275,000 homes and a ten year demand of 550,000.

In fact, the housing shortfall from brownfield is likely to be greater than these numbers suggest. Brownfield is unevenly spread across the country and most brownfield is not in areas of high housing need - so the headline numbers present a less accurate picture than the regional analysis. In the pilot, only two regions have sufficient brownfield capacity to accommodate their five year housing demand, once attrition has been factored in.

If this is representative then brownfield can make a contribution to the housing crisis, but it is not a sufficient solution on its own.

We share the view of government and many lobby groups that brownfield should be exploited for housing as far as possible. The brownfield registers are a useful part of the brownfield debate and their existence alone will be valuable to communities in understanding the opportunities and limitations of brownfield development, and to forming evidence-based housing policy.

We put forward the following recommendations:

1. Brownfield is an issue of concern to local communities. Local people and interest groups should be encouraged to put forward sites for inclusion on brownfield registers and if sites are not to be included on those registers then an explanation should be given.
2. Organizations with under-utilized estates, such as local authorities or the NHS, should be encouraged to add sites they own to the brownfield registers.
3. The registers as currently conceived contemplate sites that could start to be developed for housing over a 15 year time horizon. We think that that some assessment of likely time horizon for the development to be completed should be included in the registers - at least for sites over 200 homes.
4. The registers take no account of the attrition rate between grant of planning permission and the start of development which, according to the Department for Communities and Local Government, is about one-third. We think that LPAs should

publish total brownfield housing numbers from the register alongside total expected (i.e. after normal attrition) numbers.

5. Reduction of the attrition rate is crucial. As it is not understood why there is such a significant drop-off rate from permission being granted to homes being constructed, commissioning research into this matter is of the utmost importance. We therefore welcome Sir Oliver Letwin's review into this matter.
6. The planning rules for brownfield could be changed:
  - The definition of brownfield could be widened, making it easier for developers. For example, gardens were classified as brownfield, before being changed to greenfield.
  - Permitted Development Rights, such as those granted to light industrial buildings on 1 October 2017, could be expanded (for example to some kinds of retail property).
7. Most sites are quite small, and are suited to small house builders. If we want to encourage building on brownfield land, we must first support the small house builders who will be doing most of the construction. The Home Building Fund has been significant here so far, and expansion of it should be considered.
8. The small size of most brownfield sites limits the density at which they can be built if the existing streetscape and neighbourliness are to be preserved. Where greater density is possible this is best left as a matter for local communities through the LPA.
9. Some very large brownfield sites should be looked at on a national basis to ascertain sustainability and to see whether they could serve housing need outside of their LPA.

## Introduction

On 10 March 2016, Communities Secretary Greg Clark announced the creation of pilot brownfield registers. 73 LPAs<sup>1</sup> were chosen to pilot the scheme.<sup>2</sup>

On 3 April 2017, Gavin Barwell (Housing and Planning Minister) announced that all LPAs will be required to produce and maintain brownfield registers, commencing on 31 December 2017.<sup>3</sup>

As of December 2017, 67 of the LPAs that took part in the pilot have published their registers. The publishing of the pilot results has coincided with 'Planning for the Right Homes in the Right Places (14 September 2017) the government's consultation proposals on a new formula for assessing housing demand. This proposes a standard method for calculating local authorities' housing need based on both household growth forecasts and affordability.<sup>4</sup>

Across England, the proposed standard method calculates that 265,936 dwellings will be required every year for the next ten years. This figure will likely see adjustment during consultation.<sup>5</sup> This figure almost certainly understates housing need because no individual LPA will have its housing need increased by the new approach by more than 40 per cent compared to their current assessment.

This paper puts both data sets together to assess how far brownfield land can go towards meeting the housing demand as calculated by the new methodology – using the 67 LPAs who have published their pilot registers as a sample.

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<sup>1</sup> These LPAs are: district councils; London borough councils; metropolitan district councils; county councils in relation to any area in England for which there is no district council; the Broads Authority; a National Park authority and a Mayoral Development Corporation where it is the local planning authority for the purposes of Part 2 of the 2004 Act.

<sup>2</sup> <https://www.gov.uk/government/news/first-areas-to-push-for-faster-brownfield-land-development>

<sup>3</sup> <https://www.gov.uk/government/news/new-measures-to-unlock-brownfield-land-for-thousands-of-homes>

<sup>4</sup> The proposed formula is that each 1 per cent increase in the ratio of house prices to earnings above four results in a 0.25 per cent increase in need above projected household growth.

<sup>5</sup> 'This achieves the overall level of delivery that most external commentators believe we need, while ensuring it is delivered in the places where affordability is worst.' ('Planning for the right homes in the right places: consultation proposals', p. 11).

## What is Brownfield Land?

In the minds of many members of the public the term 'Brownfield Land' conjures images of derelict, vacant buildings or plots that are an eyesore. However, previously developed (or Brownfield Land) is defined in the National Planning Policy Framework ('NPPF') glossary as (with certain exceptions)<sup>6</sup>, 'Land which is or was occupied by a permanent structure, including the surrounding land attached to the structure, and any associated fixed surfaces.'<sup>7</sup>

Therefore, under the NPPF's definition almost every currently developed site could be defined as brownfield. There is nothing about the generic definition of brownfield that limits the term to the urban environment or cities, and brownfield can have a high ecological and environmental value (for example, ex-MoD land in the Hoo Peninsula, which is one of the most important sites in the UK for nightingales).<sup>8</sup>

In compiling a brownfield register the government's concern is not with all brownfield but brownfield that is suitable and available for housing.

The specific criteria set out for land to be entered onto the register are:

- The land has an area of at least 0.25 hectares or can support at least five dwellings.<sup>9</sup>
- The land is suitable for residential development (it has been allocated in a local development plan document for residential development; has planning permission for residential development; has a grant of permission in principle for residential development; or is, in the opinion of the LPA, appropriate for residential development).
- The land is available for residential development (the relevant owner has expressed an intention to sell or develop the land, and in the opinion of the LPA there are no issues relating to the ownership of the land or other legal impediments which might prevent residential development of the land taking place).<sup>10</sup>
- Residential development of the land is achievable ('achievable' meaning that development is likely to start within 15 years of entry into the register).

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<sup>6</sup> The NPPF makes clear that the following are not classified as brownfield land: land that is or has been occupied by agricultural or forestry buildings; land that has been developed for minerals extraction or waste disposal by landfill purposes where provision for restoration has been made through development control procedures; land in built-up areas such as private residential gardens, parks, recreation grounds and allotments; land that was previously-developed but where the remains of the permanent structure or fixed surface structure have blended into the landscape in the process of time.

<sup>7</sup> National Planning Policy Framework, p. 55.

<sup>8</sup> [http://spatial-economics.blogspot.co.uk/2013\\_04\\_01\\_archive.html](http://spatial-economics.blogspot.co.uk/2013_04_01_archive.html)

<sup>9</sup> Some LPAs in the pilot, however, have requested that all sites (including those below 0.25 ha and creating less than five units) are included. Examples of LPAs who include smaller sites are Bristol; Dover; East Riding; and North East Lincolnshire. In total, there are 286 sites included in the pilot registers that do not fulfil this criterion.

<sup>10</sup> It is not clear how closely LPAs have followed this criterion. Six LPAs put 'Unknown' for the ownership status of every brownfield site in their register, presumably meaning they do not know if the land is available for residential development. It could be that this will be corrected when the full registers are published in December.

The brownfield registers therefore aim to catalogue land which is both suitable and available to help meet the nation's housing shortfall.

### **The Purpose of the Brownfield Registers**

Brandon Lewis (Housing and Planning Minister 2014 – 2016):

'We want to help hard working families and first time buyers to own their home and to achieve this by building on brownfield land wherever possible to help protect our valued countryside. The register helps deliver both of these at a stroke.'<sup>11</sup>

Gavin Barwell, Lewis's successor as Housing and Planning Minister, confirmed on 3 April 2017 in launching the brownfield sites registers that:

'We need to build more homes in this country so making sure that we re-use brownfield land is crucial. We want to bring life back to abandoned sites, create thousands more homes and help protect our valued countryside.'<sup>12</sup>

In 2014, the government claimed that 200,000 homes could be built on brownfield sites, and committed to getting planning permission for 90 per cent of those sites by 2020.<sup>13</sup>

The intention behind the brownfield registers is to provide up-to-date, publicly available information on brownfield land that is suitable for housing. This will help developers identify suitable sites, and allow communities to draw attention to additional local sites for listing.

It is intended that the registers will be combined with 'Permission in Principle' ('PiP'), as provided for in the Housing and Planning Act 2016. Brownfield sites granted this status will have the most important points of a development settled (use, location, amount of development). However, developers will still need to obtain a full planning consent.

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<sup>11</sup> <https://www.gov.uk/government/news/first-areas-to-push-for-faster-brownfield-land-development>

<sup>12</sup> <https://www.gov.uk/government/news/new-measures-to-unlock-brownfield-land-for-thousands-of-homes>

<sup>13</sup> <https://www.theguardian.com/business/2014/jun/13/200000-homes-brownfield-land-2020-george-osborne>

## Compiling the Brownfield Registers

The pilot brownfield registers have been compiled by the LPAs. The sites in the registers have come from two main sources: existing Strategic Housing Land Availability Assessments ('SHLAAs')<sup>14</sup> and calls for sites.<sup>15</sup>

LPAs will have to maintain their registers, updating them annually.

Part 1 of the brownfield registers, which is all that has been published to date, will be a comprehensive list of all brownfield sites in a local authority area that are suitable for housing, irrespective of their planning status.

The completed registers (but not the pilot registers) will include a Part 2, which will list all sites that have been granted PiP. Sites may enter Part 2 of the register once the local planning authorities have followed the consultation and publicity requirements.<sup>16</sup>

## Outputs to Date

Our research shows that the 67 LPAs that have published their pilot registers have identified 4,894 brownfield sites between them, covering 12,960 hectares. They estimate that these sites could house 305,231 dwellings (23.55 per hectare).

The average site is 2.65 hectares in size, and can support an estimated 62 dwellings (23.4 per hectare). However, the average is a misleading measure as most sites are quite small, while a few very large sites drag the average up. For example, Northstowe in South Cambridgeshire is 1,381 hectares and can accommodate 10,000 dwellings.

A better measure is the median size, which is only 0.33 hectares supporting about 15 dwellings.

The results are set out in Appendix Two and Appendix Three.

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<sup>14</sup> The SHLAA is an annual review of potential housing sites; LPAs with such an established view process have transferred sites across to their brownfield registers, if those sites were on brownfield, and met the criteria above.

<sup>15</sup> Most LPAs have undertaken a 'call for sites', where developers, landowners, and other interested parties put forward brownfield sites for housing development.

<sup>16</sup> A site may not be included on Part 2 of the register if its development: would fall within schedule 1 of the Environmental Impact Assessment Regulations; has been screened as Environmental Impact Assessment development; would be prohibited under habitat protection legislation.

## Can Brownfield Solve the Housing Crisis?

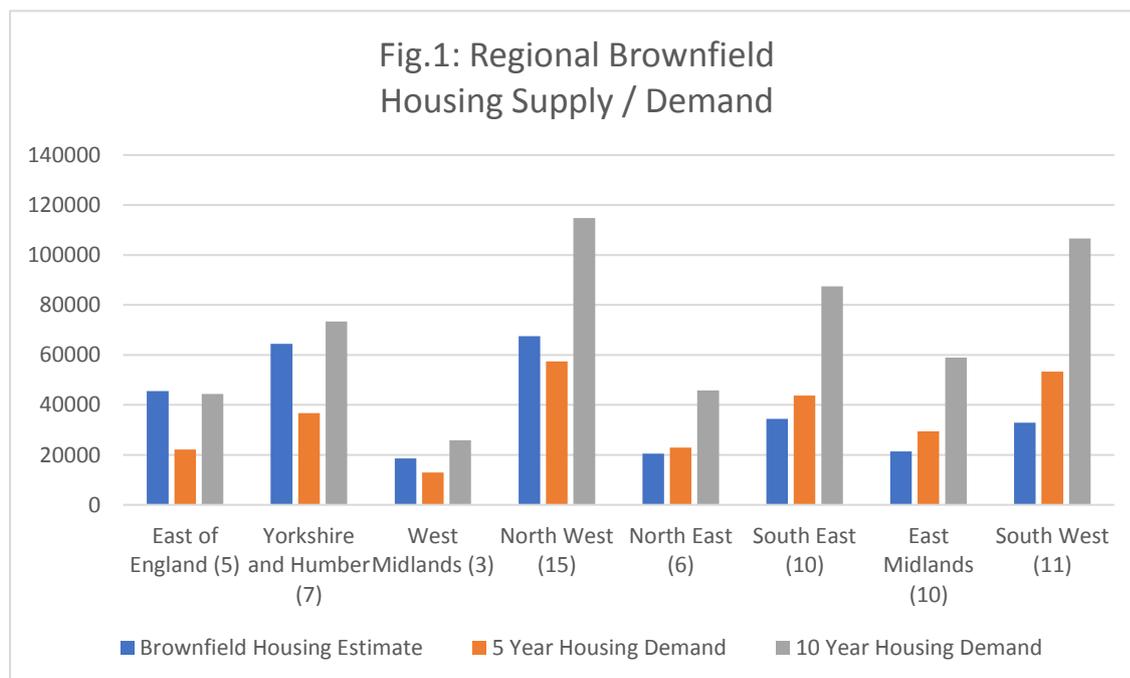
Using the government’s proposed formula for calculating housing need, the 67 LPAs with pilot registers will require 278,640 dwellings over the next five years, and 557,280 over the next ten. From the brownfield registers we can see that the total amount of brownfield suitable for housing in these areas can support 305,231 dwellings. On the face of it, brownfield can be used to build all the homes needed over the next five years in the pilot areas.

However, such a conclusion would be false. This is for three reasons:

### 1. Location of the Sites

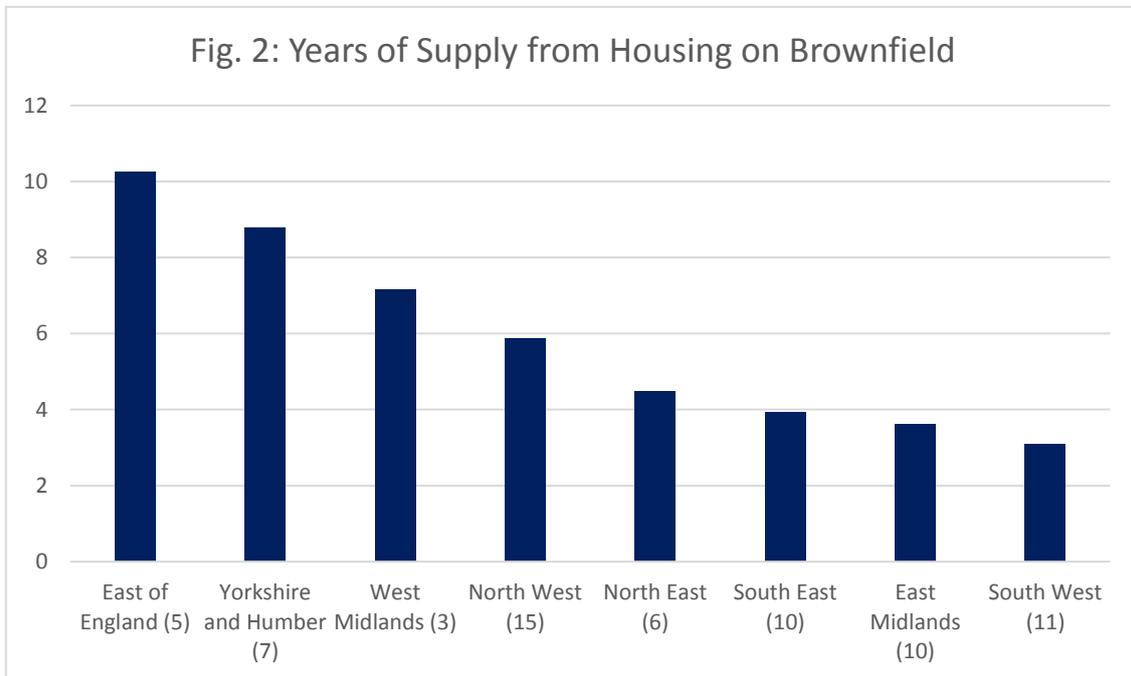
The pilot registers show that there is significant regional variation in brownfield supply vs. housing need.

Figure 1 below compares the five and ten year housing needs of the different regions against the estimated number of houses that could be built on brownfield in each.



The number in brackets after each region is the number of LPAs in that region for which we have pilot registers.

The sample size of pilot LPAs is different for each region, so a clearer guide to the amount of housing that could be built on brownfield is provided by Figure 2, which shows the years of supply each region possesses, from 10.26 years of brownfield housing supply in the East of England to 3.08 years of supply in the South West.



- 57 per cent of the 67 LPAs have fewer than five years of housing supply from brownfield.
- 85 per cent have fewer than ten years of supply.
- 97 per cent have fewer than 15 years of supply.

In Appendix Four, Figures 5 to 8 present the same analysis, but using the current assessment of housing need, instead of the government’s proposed new methodology. The results are broadly similar.

None of the pilot registers cover London, where the housing crisis is most acute. The London Land Commission has published a brownfield register, but only for publicly owned sites. 40,000 sites were identified, which could accommodate a minimum of 130,000 homes.<sup>17</sup> According to the government’s standard methodology, London requires 72,407 homes a year, meaning that these sites are only sufficient for 1.8 years of housing supply.

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<sup>17</sup> <https://www.london.gov.uk/press-releases/mayoral/city-hall-produces-first-register-of-public-land>

## 2. Timescales for Delivery

To be added to the brownfield register a site must be deliverable within 15 years.<sup>18</sup> This means that construction should be started but not necessarily finished. If we compare the 15 year housing need to the registers, then brownfield can meet only 37 per cent of demand in the pilot LPAs.

The 15 year horizon for the registers is an impediment to their utility. It is only necessary for a site to be capable of commencing development within the next 15 years for it to be added to the register. This means that difficult brownfield, needing massive remediation and public money, can be added to the register because 15 years is such a long event horizon that almost anything is possible.

Members of the public may then be presented with a picture where there is plenty of brownfield land, and yet it is still necessary for an LPA to build on greenfield – because the brownfield cannot meet the immediate housing need.

It would be more helpful to the public if for large sites over (for example) 200 homes, a realistic estimate of the delivery timeframe was included in the registers.

We discuss this issue further in the section below on very large sites - where remediation is most problematic.

## 3. Attrition

Many brownfield sites will not be built on even if they are theoretically capable of adding to the housing stock and even if they have a planning consent.

This issue is understood by the government, which has established the Letwin review on the point. The issue is explored further in the section below.

### **Can All Identified Brownfield Land Be Built On?**

The analysis above assumes a 100 per cent success rate in developing brownfield identified as suitable for housing. However, it is reasonable to assume that there will be an attrition rate, and that not all sites will be redeveloped.

A guide to the probable attrition rate is provided by Isobel Stephen, Director for Housing Supply at the Department for Communities and Local Government, who said that the ‘drop-out rate’ between planning permissions being granted and homes being built was ‘around a third’.<sup>19</sup> This drop-out rate applies to all planning permissions, not just those on brownfield.

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<sup>18</sup> Some LPAs provided information on the time scale of sites – whether they were deliverable in five, ten, or 15 years, but most did not.

<sup>19</sup> Select Committee on Economics Affairs, ‘Oral and written evidence: The Economics of the UK Housing Market’ (15 July 2016), p. 23.

It would be reasonable to assume that, for brownfield land, the drop-out rate may be even higher, due to the difficulties and expense of remediating some brownfield sites so they can be built on safely.

In the Autumn Budget 2017 the government has established a review under Sir Oliver Letwin of the attrition rate between grant of planning consent and construction (generally and not just in relation to brownfield). We recommend that the Letwin Review specifically considers whether brownfield sites typically have a higher drop-out rate than greenfield sites and, if so, what sorts of brownfield sites are least likely to come forward for development.

Most of the dwellings on the registers have planning consent, but many do not (46 per cent of the total). There will probably be an additional dropout rate for land without a consent because there are so many factors which could lead to a consent being refused. However, as we have no basis on which to estimate this additional drop-out rate we ignore it in our analysis below.

It is not known precisely why there is such a high attrition rate. John Stewart, of the Home Builders Federation, has said that, ‘virtually all’ sites with a permission that had not been started were owned by non-developers: ‘we need to understand properly...whether there are non-developers who get permission for reasons where they never intended selling for development.’<sup>20</sup>

Below we have redrawn Figures 1 and 2 but factoring in an attrition rate of one-third: the results are shown in Figures 3 and 4 (Figures 7 and 8 in Appendix Four show the effects of attrition when using the current assessment of housing need instead).

With an attrition rate of one-third, the number of dwellings that could be built on brownfield in the pilot LPAs drops from 305,231 to 203,487. And the situation in the South of England becomes even more chronic, with the South East having 2.62 years of brownfield housing supply, and the South West just 2.05 years (if all the brownfield sites are achievable within five years).

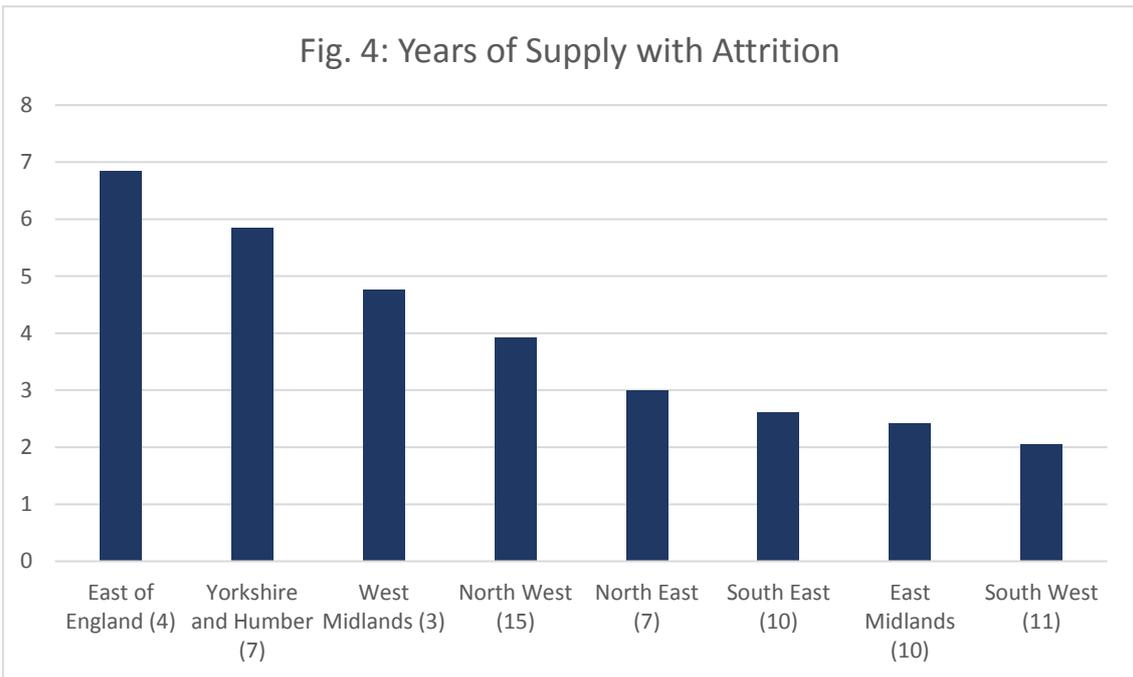
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<sup>20</sup> Select Committee on Economics Affairs, ‘Oral and written evidence: The Economics of the UK Housing Market’ (15 July 2016), p. 23.

Fig. 3: Regional Brownfield Housing Supply / Demand with Attrition



Fig. 4: Years of Supply with Attrition



## Is There More Brownfield Land?

More brownfield becomes available over time as businesses, organizations or industries move or close, or housing becomes available to redevelopment.

Trend numbers suggest that this increase is minimal. Comparing the amount of brownfield land the 67 LPAs found in the pilot registers to when they last submitted data to the National Land Use Database (either in 2010, 2011, or 2012), there has only been a 2.8 per cent rise in the number of homes that it is estimated could be built on brownfield.

There may be more brownfield that is currently in active use and therefore not on the registers, but where part of the site could be released for housing:

- Profit maximizing commercial enterprises regularly review their stock of buildings for just such opportunities. Many businesses employ a director of property or third-party consultants to ensure that they make efficient use of their estates.
- The situation may be different for non-market orientated organizations such as the NHS or local authorities. Recent government initiatives have encouraged public sector organizations to bring previously developed land forward for development, but it could be that more needs to be done in this area, and that the public sector should be more actively encouraged to add sites to the brownfield registers.

It is our impression that the public in general and some lobby groups believe that there is a large amount of brownfield that could be exploited for housing. The evidence from pilot brownfield registers does not support this point of view.

It is entirely possible that there is previously developed land available that has not been registered in the pilots. It is also possible that what the public sees as brownfield is not suitable or available for housing - but might suit some other use. There is also land that appears to be derelict but serves a strategic purpose or is being assembled into a larger regeneration project. Lastly, there is contaminated land where the clean-up costs are so large that they destroy the economics of new construction.

The registers could encourage individuals and organizations to suggest brownfield to be added to them. This may result in more brownfield housing and we think it is helpful to the debate about housing need if the public can see why sites are not suitable for housing.

Finally, we note that the public can be capricious about brownfield. Low grade and decrepit industrial buildings which could be used for housing can suddenly become a thriving artistic community, a valued part of local heritage and a cue for a planning battle. This is part of the reason that developers let buildings stand empty, increasing the optical impression of large amounts of brownfield.

## **Do Developers Want to Build on Brownfield?**

There is a widespread perception that house builders avoid brownfield sites because they are less profitable.

We have found no evidence to support this. In simple terms the house builder has two kinds of costs. Those associated with building the dwellings (raw materials and labour) and those associated with the site (buying the land and preparing it).

There may be some instances where the cost of materials is higher on brownfield because, for example, it is necessary to match an existing streetscape; but in general, the cost of raw materials and labour are unlikely to vary between greenfield and brownfield.

This leaves the costs associated with the land. But in buying land developers work backwards from a target profit to calculate the price they are willing to pay for the land. If a brownfield site has costs associated with it that would not apply to a greenfield site (such as clean up or difficult site access) then the developer will take those costs into account when bidding for the site.

To put it crudely, if there is money to be made from developing a brownfield site someone will be willing to develop it to extract that money. And moreover, provided there are lots of developers they will bid in competition to get the land so maximizing the price to the seller. It is possible that the owner of the site refuses to sell, because they have a different view of value - but that's how markets work.

We agree that most brownfield sites are not of interest to the major UK house builders. The combined stock market capitalization of the top five quoted house builders is £30bn. Their scale makes it extremely unlikely that they would be interested in most brownfield sites which, as shown above, can only accommodate 15 dwellings or fewer.

They are interested, and are often seen on, large brownfield sites where their financial muscle and in-house expertise give them an advantage. However, only 21 per cent of the sites identified in the Pilot Registers could accommodate 60 dwellings or more and the major house builders would find the remainder of the sites too small to develop.

The government is helping to overcome this problem through the Land Assembly Fund, which has been given £1.1 billion to assemble fragmented pieces of land into sites suitable for developers. This principle has been successful in Leeds, where Keepmoat have worked with the local council to combine eight different brownfield sites into one 971 home project. Combining sites in such a way makes development more efficient, and means that land with a negative value (due to the high cost of remediation) can be subsidized by positive value land.<sup>21</sup>

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<sup>21</sup> <https://www.constructionnews.co.uk/data/industry-barometer/building-on-brownfield-how-new-register-can-drive-growth/10014713.article>

However, most brownfield sites will be developed by small house builders. 51 per cent of sites in the pilot registers can accommodate 1-15 dwellings, perfect for small house builders. However, one-third of small house builders ceased building homes between 2007 and 2009 due to the credit crunch.<sup>22</sup> Moreover, the more cautious banking sector post 2007 makes it harder for new entrants to this sector.

The government has recognized this problem and has initiated a £3 billion Home Building Fund. Small house builders bought 89 per cent more land in the last twelve months than the year before and this fund almost certainly contributed to that trend.<sup>23</sup> If the Home Building Fund is working (as it seems to be) then it should be increased in size.

Finally, there will be some brownfield sites which are so polluted that they have a negative value - meaning that the clean-up costs exceed the value of the site. In 2015, Savills used the National Land Use Database to estimate that 40 per cent of the potential homes that could be built on brownfield would be financially difficult to develop, if not financially unviable.

In these situations, the free market model we have described above will fail to redevelop the site. It follows that if society wants these sites redeveloped then the clean-up costs, or part thereof, will have to be met by government. We therefore welcome the £630 million announced in the Autumn Budget that the government is channeling to remediate small sites, and deliver on-site infrastructure.

### **How helpful is Permission in Principle?**

54 per cent of the estimated housing on the pilot registers already has some sort of permission, and will therefore not be significantly affected by the principle of PiP.<sup>24</sup>

As with housing estimates, there is regional variation in how much of the estimated housing has permission. For most regions, the figure is close to 50 per cent, with the exceptions of the West Midlands, which has an unusually high number of permissioned homes (92 per cent) and the North East, which has an unusually low figure (17 per cent). It is in the North East, therefore, that we should expect PiP to have the greatest impact.

PiP confirms the location, use, and number of homes to be built. All technical details must still be granted permission by the LPA. This is a substantial undertaking and it remains to be seen how much PiP will encourage developers, especially as PiP does not differ enormously from Outline Planning Permission.

Some LPAs have already objected to PiP, as it centralises planning powers away from them and 'undermines the plan led system.'<sup>25</sup>

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<sup>22</sup> Home Builders Federation, 'Reversing the Decline of Small Housebuilders' (2017), p. 20

<sup>23</sup> Savills, 'UK residential development land' (July 2017), p. 1.

<sup>24</sup> This excludes North East Lincolnshire, who did not provide information on 'Permission Status'.

<sup>25</sup> Select Committee on Economics Affairs, 'Oral and written evidence: The Economics of the UK Housing Market' (15 July 2016), pp. 785-86.

It could be that PiP has an adverse effect on market conditions by driving up the asking prices of brownfield. Owners of brownfield sites may feel that PiP makes their land more marketable and more valuable, whereas developers may not place the same certainty value on PiP. This could lead to fewer deals and fewer homes being built on brownfield land. On balance, however, markets work better with more information and we expect the market to continue to find clearing prices for brownfield.

### **Housing Density on Brownfield**

The pilot registers include an estimate of the number of homes that can be built on each brownfield site.

The estimated average density is:

- 30 dwellings per hectare for sites of 15 dwellings or fewer
- 33 dwellings per hectare for sites of 16 to 999 dwellings
- 12 dwellings per hectare for sites of over 1,000 dwellings

30 dwellings per hectare was the minimum target density in the now defunct Planning Policy Guidance 3. This was replaced by the Planning Policy Statement 3, which removed the requirement for a national minimum density.

The small size of most brownfield sites makes increasing density difficult. There will be issues of the preservation of the urban landscape, rights of light and the quality of space being built.

The very low densities for sites over 1,000 units cannot be explained through the data we have. It is likely that there are site specific factors that have dictated these densities or that the data masks something else.

There are many advocates for increased densities in new housing developments but there are also many commentators who deride high density schemes for producing 'rabbit hutches' instead of homes. The appropriate density for a site inevitably depends upon the nature of that site and the community it is part of. This suggests to us that density on brownfield is a local matter, best addressed through the current system of plan-making.

## Very Large Brownfield Sites

The registers identify 25 very large (over 1,000 dwellings) brownfield sites. While this is only 0.51 per cent of identified sites, they make up 22 per cent of the estimated housing potential. Most very large sites (60 per cent) already have permission.

Some of these are consented and being built out. Some are in parts of the country where they are not essential to meet housing need.

Very large sites take many years to complete; for example, in Huntingdonshire, the Alconbury Weald site will accommodate 5,000 homes, but the project will be rolled out over 20 years.<sup>26</sup> This should be borne in mind when looking at housing supply from brownfield in the East of England, where 79 per cent of housing on brownfield land is coming from very large sites.

Very large sites could make a significant contribution to meeting housing need and we think there is a case for taking them out of purely local plan making. The argument for involving central government in such sites is twofold:

1. LPAs are under a duty to consider brownfield first. In general, this makes sense and produces a sustainable solution. But some very large brownfield sites will almost by definition be in areas away from existing communities and their transport, schools, services and infrastructure. It might be a more sustainable solution to build on greenfield and return the brownfield back to nature. A central government input to considering these sites could speed up the process of analysing their sustainability and hence speed up housing delivery.
2. Many very large sites are in LPAs that do not need to build on them to meet their own housing need. However, they might be suitable to meet demand in other parts of the country where housing need is greater, but only if transport infrastructure, and especially rail links, can be improved. For example, Thurrock is part of the London commuter belt and has enough brownfield for 12,537 homes. At present, it takes approximately an hour to get to central London from Thurrock by car or public transport, but if transport links were improved, Thurrock's brownfield sites would be better able to help meet demand for housing in London, as well as local housing need. Central government can identify very large brownfield sites where new or upgraded rail links would help meet national housing need in a way that LPAs cannot. The profits from building on this scale can contribute to national transport improvements if a national approach is taken.

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<sup>26</sup> <http://www.alconbury-weald.co.uk/what-is-happening/development>

## Appendix One: Methodology

73 LPAs were chosen by the government to participate in the pilot registers. Of these, 67 were used in the calculations. The six excluded from the data either had not published their brownfield register, or had published but subsequently withdrawn it:

- Central Bedfordshire
- Cornwall
- Liverpool
- Tonbridge and Malling
- Walsall
- Wolverhampton

156 of the identified sites were given housing estimates between -22 and zero. These sites have been excluded from the data used here.

For some of the housing estimates and some of the current assessments of housing need, a range was provided. In these instances, the average was used.

Several councils did not provide a housing estimate. In these instances, the housing minimum was used instead. Other councils provided a housing estimate for most sites, but not for all. In these instances, the housing minimum was used for those individual sites.

Sandwell's housing minimum is higher than its housing estimate, but this is due to a data entry error concerning the Eastern Gateway Development Site. This is listed as two sites, with a combined housing estimate of 72, but a combined minimum of 1,737.

Some councils did not give the number of dwellings for sites in whole numbers (e.g. Preston). In these instances, the housing number was rounded to the nearest whole number.

## Appendix Two: Table of Individual Local Authority Data

LPA	Region	Number of sites	Total area (ha)	Housing estimate	Percentage of estimated housing with permission	Assessment of housing need based on proposed formula (per annum)	Years supply (estimated w. proposed formula)
Bassetlaw	East Midlands	24	210	2645	73	324	8.16
Bath and North East Somerset	South West	55	140	5041	98	626	8.05
Blackpool	North West	90	49	2352	21	93	25.29
Bolton	North West	68	119	4502	34	798	5.64
Bristol	South West	242	88	9295	81	2420	3.84
Broxtowe	East Midlands	40	182	3121	24	360	8.67
Bury	North West	68	68	2060	9	597	3.45
Cherwell	South East	38	803	5968	80	762	7.83
Colchester	East of England	33	43	2283	0	1095	2.08
Corby	East Midlands	8	10	415	68	489	0.85
County Durham	North East	33	109	3249	43	1368	2.38
Dover	South East	42	142	2795	55	594	4.71
Dudley	West Midlands	19	31	1085	100	601	1.81
East Devon	South West	36	24	1004	50	844	1.69
East Northamptonshire	East Midlands	5	2	111	86	463	0.24
East Riding	Yorkshire and the Humber	89	101	2436	47	991	2.46
Exeter City	South West	23	7	921	67	627	1.47
Gateshead	North East	57	101	3762	22	470	8
Gedling	East Midlands	46	71	1868	28	468	3.99
Hart	South East	39	206	3538	57	292	12.12
Huntingdonshire	East of England	29	943	11857	50	1010	11.74

Hyndburn	North West	18	11	355	42	60	5.92
Kettering	East Midlands	7	9	303	49	521	0.58
Kingston upon Hull	Yorkshire and the Humber	78	104	5615	33	409	13.73
Leeds	Yorkshire and the Humber	341	788	30644	46	2649	11.57
Manchester	North West	161	148	5567	16	2661	2.09
Medway	South East	42	25	1325	72	1665	0.8
Mid Devon	South West	31	26	456	71	366	1.25
Milton Keynes	South East	50	57	2082	21	1831	1.14
Newcastle upon Tyne	North East	64	85	7139	92	1073	6.65
North East Lincolnshire	Yorkshire and the Humber	28	25	908	51	236	3.85
North Somerset	South West	47	27	1119	98	1305	0.86
Northampton	East Midlands	25	61	3667	53	1321	2.78
Northumberland	North East	145	188	4693	53	707	6.64
Nottingham	East Midlands	207	102	6852	58	1010	6.78
Oldham	North West	136	52	1472	78	716	2.06
Oxford	South East	64	98	2818	25	746	3.78
Pendle	North West	39	29	847	77	165	5.13
Peterborough	East of England	43	1652	5761	85	942	6.12
Preston	North West	41	44	1317	60	225	5.85
Rochdale	North West	65	88	3079	80	514	5.23
Rossendale	East of England	20	10	377	54	212	1.78
Rotherham	Yorkshire and the Humber	63	47	2072	12	593	3.49
Runnymede	South East	55	55	1645	59	557	2.95
Rushcliffe	East Midlands	19	81	1801	68	600	3
Salford	North West	282	243	25672	52	1385	18.54

Sandwell	West Midlands	249	467	14440	98	1432	10.08
Selby	Yorkshire and the Humber	38	106	2799	61	371	7.54
Sheffield	Yorkshire and the Humber	356	364	20015	49	2093	9.56
South Cambridgeshire	East of England	105	2108	25301	49	1182	21.4
South Gloucestershire	South West	69	314	6850	45	1474	4.65
South Ribble	North West	29	90	1994	45	228	8.75
South Tyneside	North East	24	30	816	1	365	2.24
Stockport	North West	48	154	2647	92	1078	2.46
Stroud	South West	97	229	2608	36	635	4.11
Sunderland	North East	15	31	890	36	593	1.5
Swindon	South West	73	103	2971	79	1021	2.91
Tameside	North West	114	61	2340	50	648	3.61
Teignbridge	South West	19	23	587	65	756	0.78
Telford and Wrekin	West Midlands	26	110	2995	53	555	5.4
Thurrock	South East	200	242	12537	42	1158	10.83
Torbay	South West	66	35	1970	9	588	3.35
Trafford	North West	74	651	5981	19	1319	5.55
Waverley	South East	36	67	902	65	538	1.68
Wellingborough	East Midlands	9	19	569	89	340	1.67
West Oxfordshire	South East	24	46	763	44	601	1.27
Wigan	North West	68	290	7362	50	992	7.42

### Appendix Three: Table of Regional Breakdowns

Region (number of LPAs)	Number of sites	Area (hectares)	Housing estimate	Percentage of estimated housing with permission	Assessment of housing need based on proposed formula (per annum)	Years supply (estimated w. proposed formula)
East Midlands (10)	390	658	21352	53	5896	3.62
East of England (5)	230	4756	45579	52	4441	10.26
North East (6)	338	543	20549	17	4576	4.49
North West (15)	1301	2096	67547	49	11479	5.88
South East (10)	590	1742	34373	51	8744	3.93
South West (11)	758	1022	32822	67	10662	3.08
West Midlands (3)	294	606	18520	92	2588	7.16
Yorkshire and Humber (7)	993	1535	64489	46	7342	8.78

**Appendix Four: Graphs using the current assessment of housing need, as opposed to the government’s methodology**

The sample size for the current assessment of housing need is smaller than that of the government’s methodology, as not all LPAs had data on their housing need. There is one fewer in the North East, two fewer in the South West, and three fewer in the East Midlands, meaning these regions cannot be compared like-for-like with Figures 1-4. Note that the regions have been reordered so that they are still in descending order of years of supply.

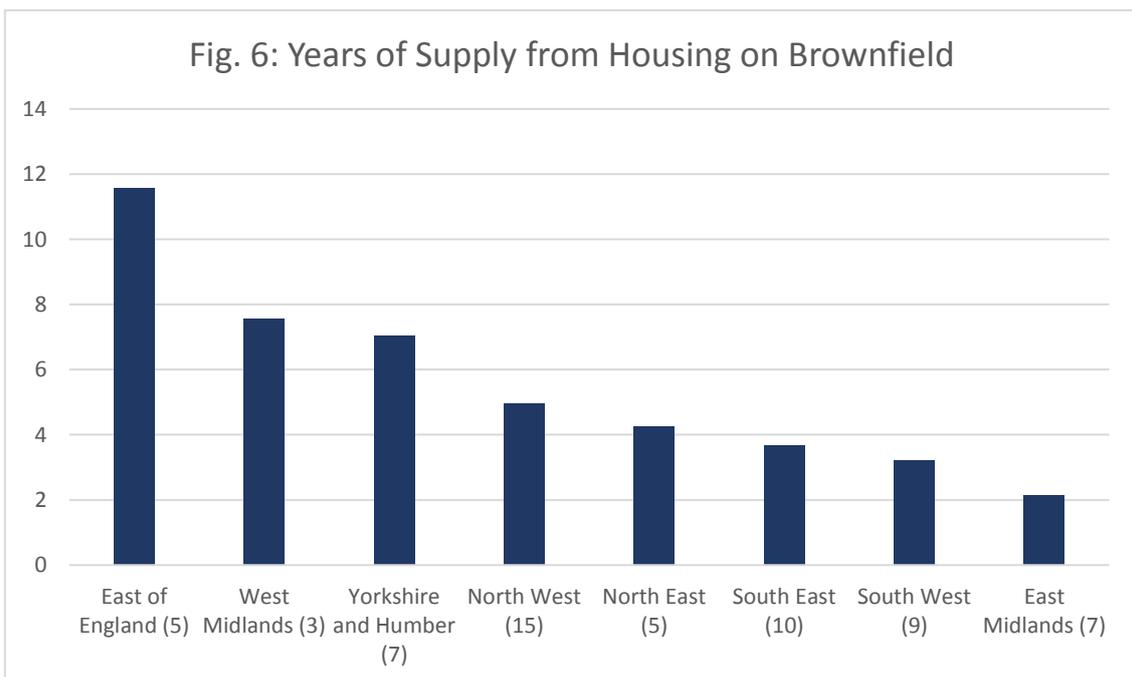
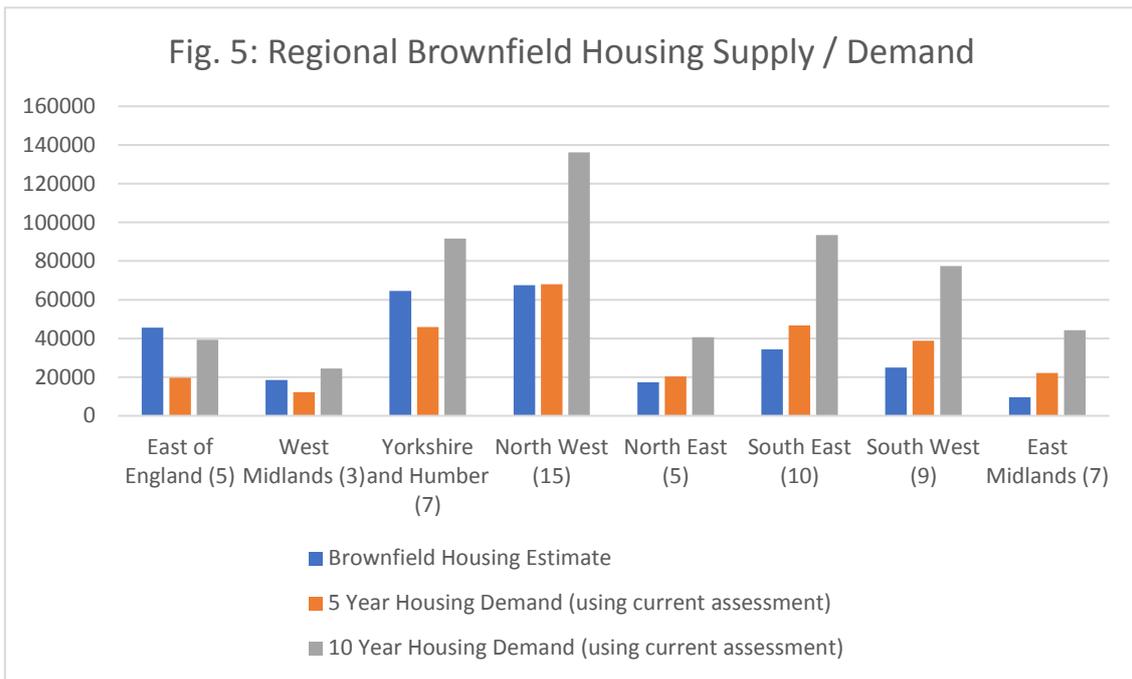


Fig. 7: Regional Brownfield Housing Supply / Demand with Attrition

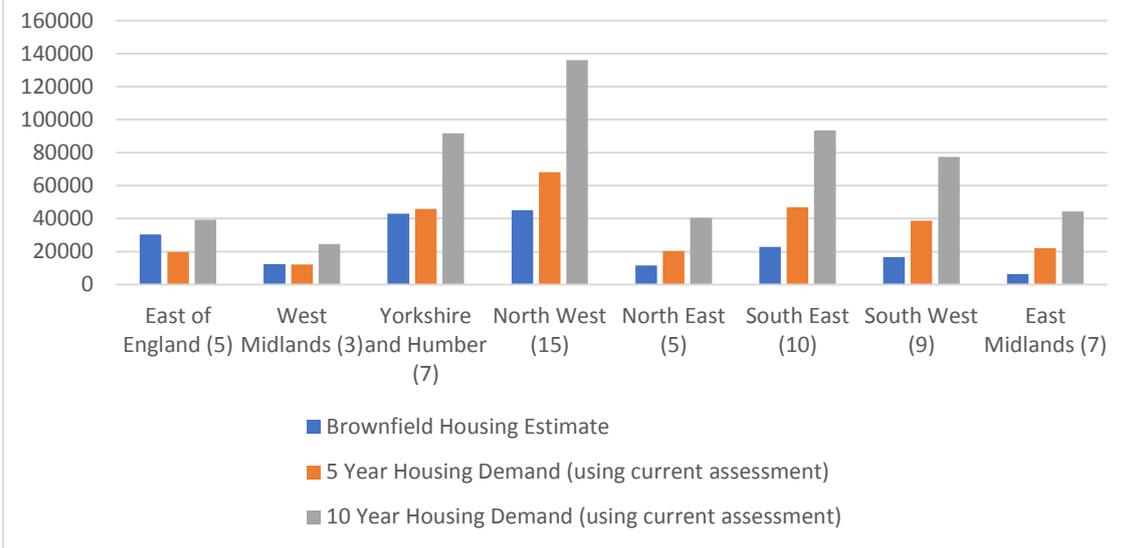
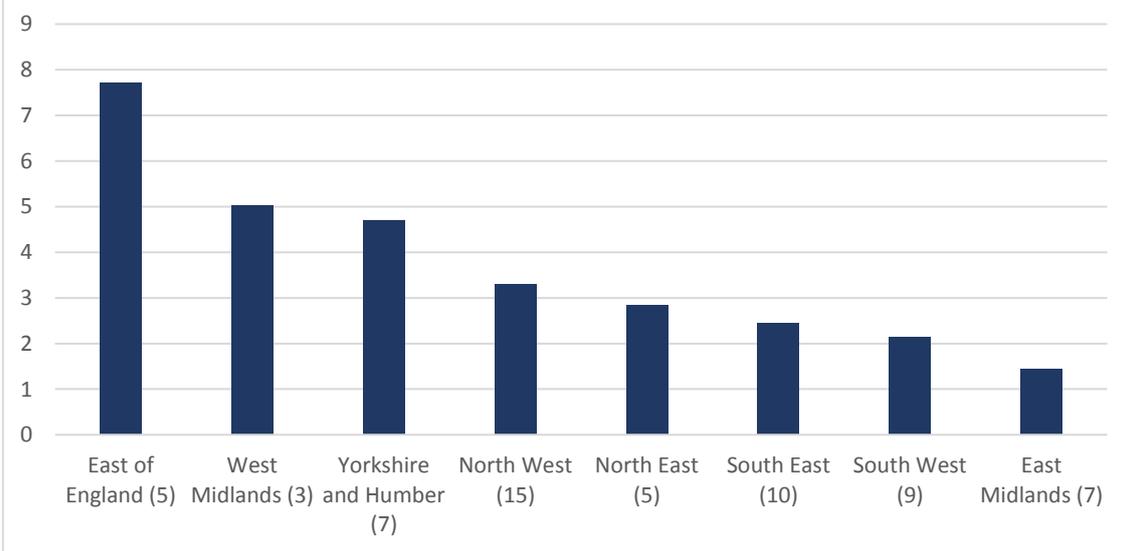


Fig. 8: Years of Supply from Housing on Brownfield with Attrition





## The Gracechurch Group

The Gracechurch Group is comprised of planning experts, investors and developers. The group promotes evidence based research and practical policy outcomes.



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