

# **Consultation Submission**

## **Housebuilding market study: CMA Update report and consultation on a market investigation reference**

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## **Introduction**

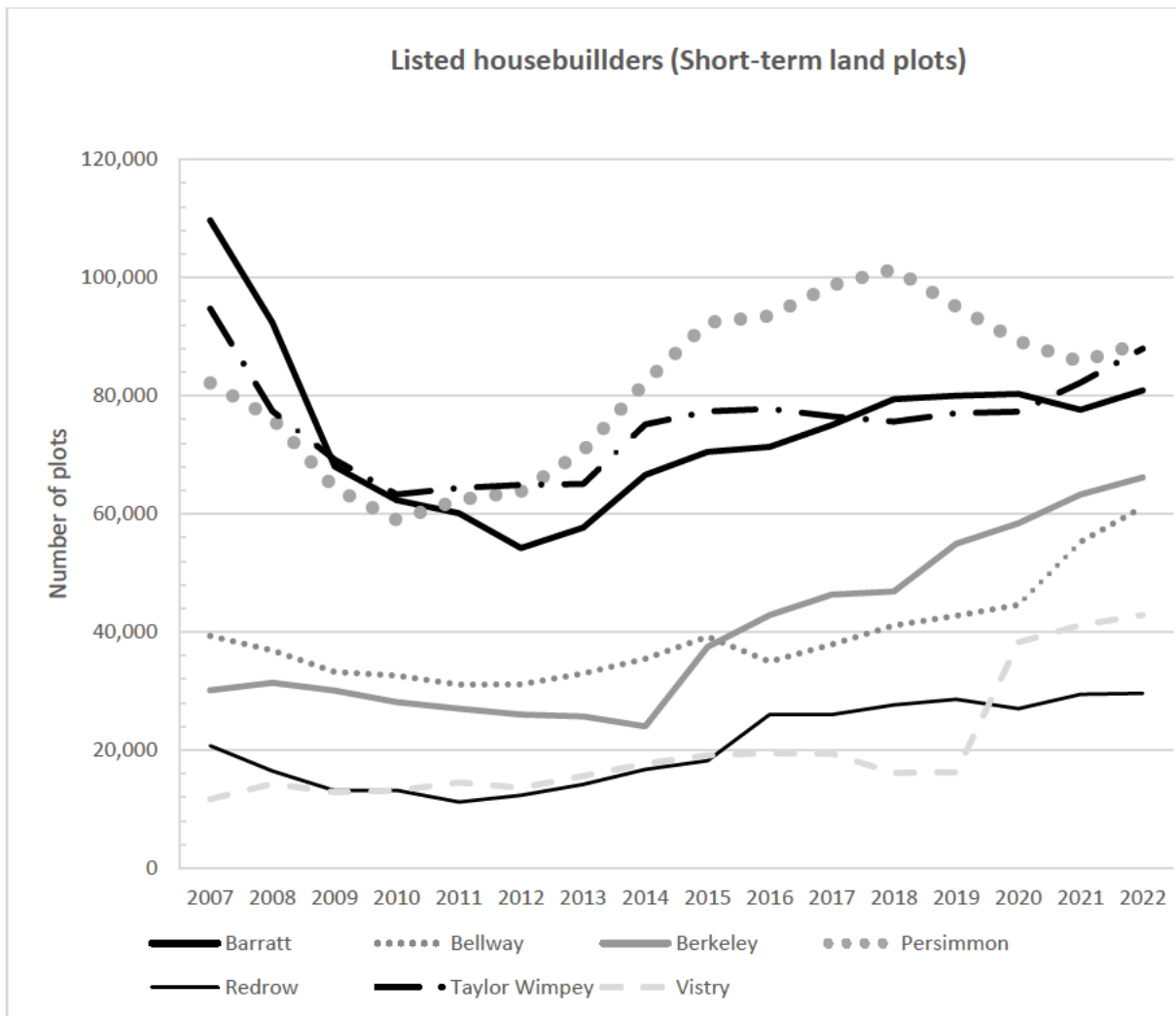
The data and analysis provided below focuses on the land holdings of the leading volume house builders in the UK. Albeit there is a relatively small element of repetition, previous data and analysis presented in an earlier response has been refined and augmented. Differences and discrepancies between data included in the [previous response](#) submitted in March 2023 and the CMA Update study are discussed and explained. Additional data has also been extracted from the annual reports of the UK house builders on their strategic land banks. Focussing mainly on the land holdings on the largest US housebuilders, the UK firms are contrasted with firms in other markets to provide a comparative perspective. Whilst the focus of this submission is mainly on the listed housebuilders, it is also worth noting that the some of the UK's unlisted residential developers have land banks that may be comparable in relative terms to the listed housebuilders.

In their annual reports and other documents describing their financial performance, companies use different labels and classification to distinguish between sites that can be developed in the short-term and sites that are expected to only become available in the longer term. A range of criteria are used by different housebuilders to categorise sites – with detailed planning permission, outline consent, resolution to grant, owned, controlled, acquired subject to unconditional or conditional contract, allocated in an emerging plan etc. Apart from Bellway, all of the companies have put their land into one of two ‘buckets’ that can broadly be defined as short-term or strategic. Bellway who categorise their sites into three groups - sites with detailed planning consent where build-out can begin in a matter of months, ‘pipeline’ sites which do not have a detailed planning consent but where development is expected to commence in the next three years, and strategic sites, typically held under option, which are expected to become available in the long term. Albeit some of the Bellway’s pipeline sites will have outline consent and would be classified as short-term land by its competitors, other sites without a consent would be classified as strategic. In the absence of more detailed data, although it will overestimate their ‘short-term’ land bank relative to other housebuilders, below all of Bellway’s plots classified as ‘pipeline’ have been included in the short-term land bank estimates. This was the classification adopted in the CMA Update report drawing upon Jefferies data. Barratt also classify their short-term land as either ‘owned and unconditionally contracted’ and ‘conditionally contracted’. The data presented in the earlier submission had excluded ‘conditionally contracted’ plots. This has been changed and is now consistent with the data included in the CMA Update report.

## **Data and Discussion**

Turning to the data on inventories of short-term land for the seven leading listed housebuilders, Figure 1 presents the number of short-term land plots.

**Figure 1**



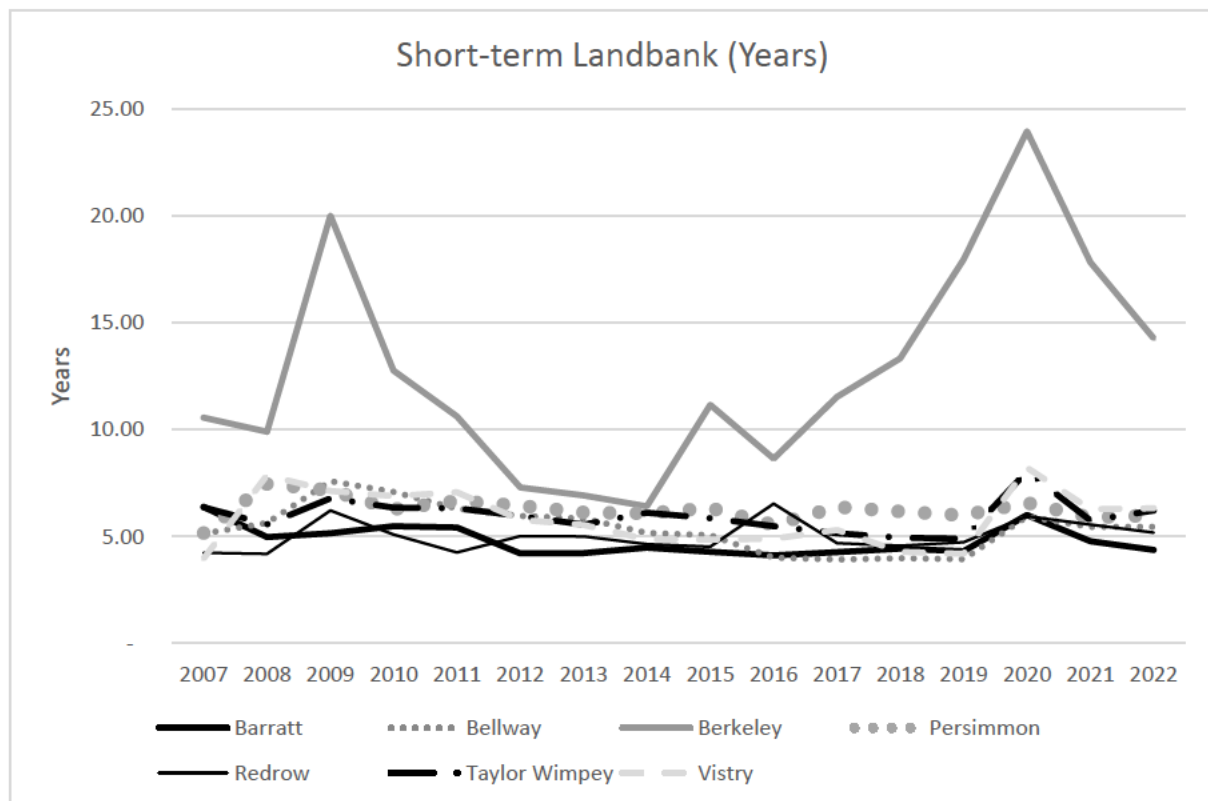
There is little evidence here to suggest that the volume house builders have been significantly increasing the size of their land holdings in the last fifteen years. Broadly, in terms of holdings of plots of short-term land, in absolute terms four of the five listed housebuilders decreased their land inventory in the period following the GFC. Barratt, in particular, halved their short-term land holdings between 2007 and 2012. As the housebuilders themselves and the housing market recovered from the GFC, both their completions and landbanks have expanded. However, both Barratt and Taylor Wimpey have not reached the levels of land inventory reached in 2007. Vistry had a sharp increase in the size of their land bank relatively recently as the merger of Bovis, Linden Homes and Countryside Partnerships increased their total capacity sharply after 2019.

Persimmon followed a broadly similar pattern to Barratt and Taylor Wimpey. Persimmon's land holdings fell from c82,000 plots in 2007 to c62,000 plots in 2011. They then climbed steadily to over 100,000 in 2018 declining to approximately 89,000 in 2022. A notable outlier here is the Berkeley Group. Whilst their land holdings decreased from c30,000 units in 2007 to c24,000 units by 2014, there has been a dramatic expansion since then to over 66,000 units in 2022. This has not been accompanied

by any comparable increase in completions. The Berkeley Group reported 3,742 completions in 2014 compared to 4,632 in 2022.

Figure 2 illustrates the ratio of completions to plots of short-term land in a specific year. It is worth noting that spikes in the ratios can be caused by relatively short-term drops in completions as well as short-term increases in the land bank. This is illustrated in 2020 when the fall in completions due to the pandemic led to an increase in the ratio of plots in the land inventory to completions. A similar fall in completions relative to the fall in land holdings to increases in the ratio of land plot holdings to completions led following the GFC in 2008-9. The pattern is broadly consistent with the data on number of plots. On average, for this metric there has been little change in the size of the short-term land holdings over the last 15 years. In 2007, the average land inventory was 5.98 years of completions. This had increased to 6.83 years in 2022. However, Berkeley is an outlier here and tends to distort the figures. If excluded, the comparable figures are 5.21 and 5.59. Again, if Berkeley is excluded, it is difficult to find clear evidence of significant variation between the housebuilders.

**Figure 2**



The clarity of data regarding the strategic land inventories of listed housebuilders is less consistent compared to data on short-term land holdings. In addition to the issues with the short-term land banks such as variation in reporting dates, definitions and labels, given that strategic sites by definition do not yet have a planning consent, a density assumption needs to be made in order to estimate the number of plots. Several annual reports explicitly set out the proportion of strategic land bank controlled through

options rather than being owned by the housebuilder (typically a significant majority is controlled through options when this is reported). Some annual reports also indicate the progress of sites in the planning pipeline, differentiating between those allocated for housing in an adopted or emerging plan and those that are not yet allocated. A few annual reports also indicate the progress of sites in the planning pipeline, differentiating between those allocated for housing in an adopted or emerging plan and those that are not yet allocated. Furthermore, the units used for reporting can vary; for example, Barratt and Persimmon typically report their strategic land holdings in acres, while most other listed housebuilders use the number of plots as their metric. Bellway shifted to reporting the total number of strategic land plots from 2018 onward but previously reported only on strategic land plots with a "positive planning status." Nevertheless, across all listed housebuilders, except Berkeley, there is a consistent emphasis in their annual reports on how much of their development land comes from their strategic land portfolios. Typically, this accounts for 30% to 50% of their completions.

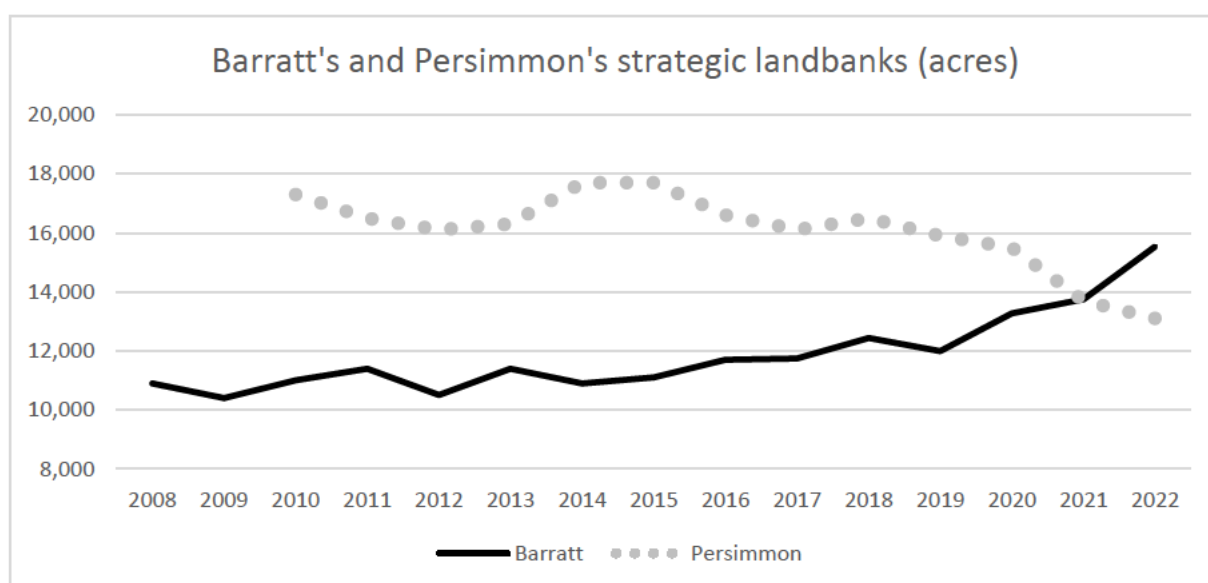
Figure 3 presents the strategic landbanks reported by Barratt and Persimmon, revealing contrasting trends in their land holdings. In 2010, Persimmon possessed 17,300 acres of strategic land, which decreased to 13,100 acres by the end of December 2022. In contrast, Barratt's strategic land increased from 11,000 acres in 2010 to 15,537 acres by the end of June 2022. In Barratt's annual report for 2022, 15,537 acres of strategic land is also reported as equating to 91,440 plots suggesting a ratio of nearly six dwellings per acre. Although this may seem low, it may be plausible. Assuming a ratio of gross developable land to net developable land of 60%, it equates to around 10 dwellings per net developable acre. By 2020 and 2021 Barratt and Persimmon had very similar sized land banks. The acquisition of the UK's Gladman, the UK's largest independent land promotion business in January 2022 has changed the market landscape and introduced a new category into Barratt's land inventory – promotional plots. The 2022 annual report stated that "Following the acquisition of Gladman, the Group now holds a significant promotional land portfolio, encompassing some 93,696 promotional plots.". To be clear, these 93,696 promotional land plots should be considered separately from their 91,440 strategic land plots. However, it is clear that Barratt view the promotional land portfolio as part of their pipeline. The 2022 annual report states that

"Reflecting the changing needs and aspirations of land promotion partners, Gladman now offers the ability to convert promotional agreements into option, hybrid or freehold sale arrangements for all, or part, of their land promotion partners' holdings." (Barratt, 2022, 37)

In their 2022 annual report, Persimmon stated that their strategic land bank consisting of 13,100 acres in 2022 would produce "in excess of 100,000" plots. However, there is a notable discrepancy between the data provided by Jefferies reported in the CMA Update report. The CMA/Jefferies data indicates significant increases in Persimmon's strategic land plots since 2012. In 2012, according to the CMA/Jefferies data, there were over 60,000 strategic land plots. By 2019, this had increased to over 120,000 according to this source. In contrast, in terms of the number of acres cited in Persimmon's

annual reports, the size of the strategic land bank has been relatively stable and has even slightly decreased. For instance, in December 2012, Persimmon reported holdings of 16,100 acres of strategic land and, in 2019, they reported holdings of 15,900 acres of strategic land. Without more information on the methodology used to estimate the number of strategic land plots in the CMA/Jefferies data, this apparent disparity is difficult to explain.

**Figure 3**



In Figure 4, Taylor Wimpey stands out as having the largest strategic land bank. They had 102,892 strategic land plots in 2007 which increased to more than 144,000 as of 31 December 2022. The data are *broadly* in line with CMA/Jefferies here. A slight increase from previous years, Taylor Wimpey reported that 52% of their completions come from strategically sourced land in 2022. It is notable that Taylor Wimpey’s main competitors – Barratt and Persimmon – report comparable figures of 26% and 36% respectively for 2022. It is also reported by Taylor Wimpey that the net book value of the short-term landbank was £2.9 billion whilst, although the number of plots is much higher, the value of “long-term **owned** (my emphasis) land” was £311 million representing 36,646 plots excluding a further total **controlled** strategic pipeline of 107,739 plots. It is expected that the option agreements are the most important instrument used to ‘control’ sites.

In contrast, Berkeley seems to have a relatively minor focus on strategic land. In their annual reports, they do not distinguish between short-term and strategic land as clearly as the other firms. Similarly, the CMA/Jefferies data is minimal for Berkeley<sup>1</sup>. In their 2023 annual report, it is stated that 91% of

<sup>1</sup> Reading from the line graph in the CMA Update report, only two data points are provided. For 2013 and 2014, a long-term landbank of around 10,000 plots is indicated. Berkeley’s 2014 annual report states that “Berkeley’s pipeline now comprises some 11,000 plots on 13 sites where delivery is dependent on resolving technical constraints, challenges surrounding vacant possession and/or securing planning consent.” Its 2013 annual report states that “[T]here remain approximately 10,000 plots in Berkeley’s longer-term land bank. This

their plots have an outline planning consent. As was noted above, Berkeley was an outlier in terms of the relative size of their short-term land bank and they also seem to be an outlier in terms of the relatively small scale of their strategic or long-term land holdings. Berkeley do report some figures for “pipeline” plots. In the last decade, these have generally been described as “long-term” or as a “strategic pipeline of long-term options”. In 2023, 14,000 plots were reported to be in this category compared to 8,000 in 2022. However, the data is rather inconsistent and at other times too consistent. For instance, between 2015 and 2020 the annual reports stated every year that the (long term) pipeline consisted of 5,000 plots on which Berkeley had long-term options.

Turning to the other large, listed housebuilders, Bellway have also provided quite inconsistent data on their strategic land holdings. Their annual reports state that they had 3,000 acres of strategic land in 2010 and 2011. Assuming six dwellings per acre of gross developable land, this would equate to 18,000 plots. At the end of July 2022, they reported that there were 35,600 plots in their strategic land bank. However, equating to around 5,800 plots, they only report strategic land plots with a “positive planning status” prior to 2018. It is likely that the sharp upturn in the Bellway’s estimated long-term land holdings observed in the CMA/Jefferies data in 2018 mostly reflected changes in reporting practices (incorporating all strategic land plots rather than just those with a positive planning status) rather than the effects of any additional significant strategic land acquisitions.

Whilst most of the privately owned housebuilders do not report on their land banks, two of the largest do so. At first sight, there seems to be an interesting distinction between Miller and CALA. At the last reporting period in 2022, CALA reported 21,678 plots in their short-term land bank and 11,150 plots in their strategic land portfolio. Miller (who built about 25% more homes than CALA) had a smaller short-term land bank (13,914 plots) but had a strategic land bank of over 39,000 plots. However, this is largely attributable to Miller’s acquisition of Wallace Land (an independent specialist land promotion business) in 2021 which nearly doubled the size of the strategic land inventory. It would appear that, similar to Barratt, Miller expect conversions of strategic land to short-term land from Wallace Land’s portfolio of strategic sites to supplement the supply of short-term land.

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includes land under option which requires promotion through the planning system and long-term regeneration land under contract.” It is possible that the sharp increase in the short-term land bank between 2014 and 2015 illustrated above may be due to a reclassification of some of the longer-term land bank.

Figure 4

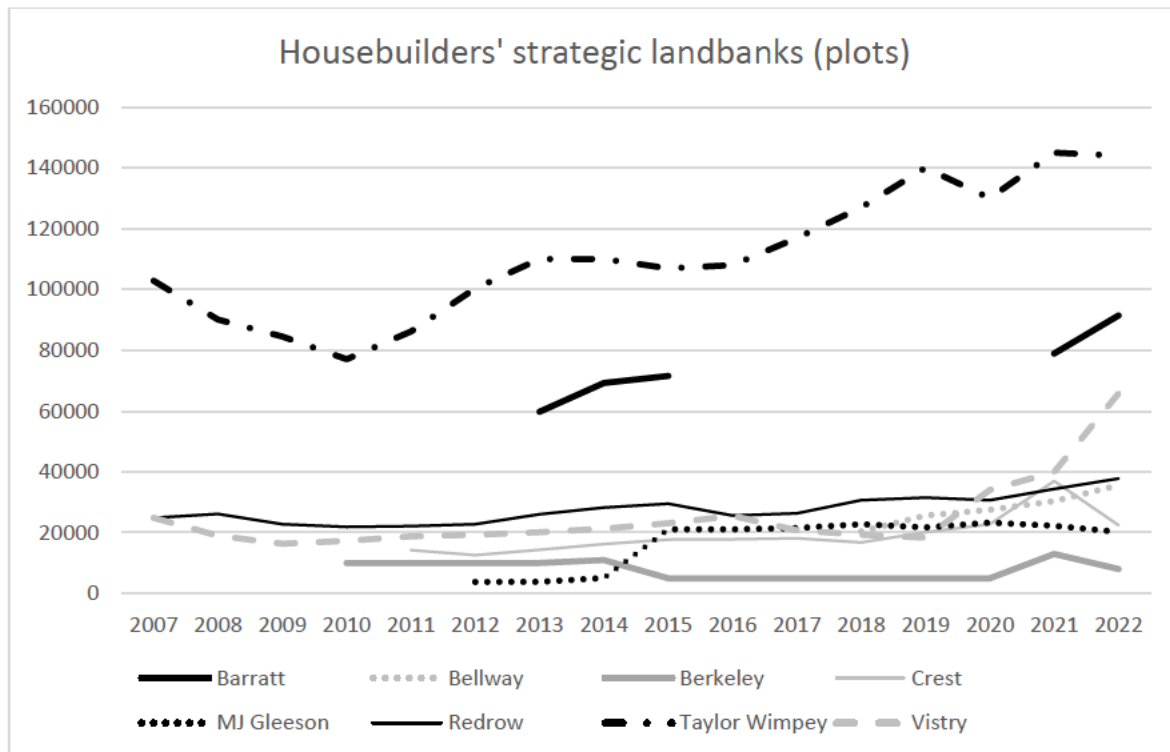


Figure 5 illustrates the *value* of the total land inventories of the largest seven listed housebuilders. Both owned strategic and short-term land holdings are included. It is also worth noting that a substantial proportion of the land inventory will be the land component of dwellings which are under construction. As noted earlier, the value of the land holdings is reported at the lower of cost or net realisable value. This will mean that there may be a downward bias in the figures. However, it is notable that the Knight Frank Residential Development Land Price index reports around 12% growth in ‘English Greenfield’ land values from 2012 until 2022. This is broadly consistent with Savills’ Residential Development Land Index<sup>2</sup>. If these indexes are reliable, it has almost certainly not been the case that, outside of central London, housebuilders holding large land banks would have benefitted from significant growth in residential land values in the last decade.

The three largest listed housebuilders in terms of annual completions have seen little change or falls in the nominal values of their land inventory over the whole period. Following the sharp falls in values and holdings after the GFC, there has been a steady if variable increase since 2012. By 2022, the value of the land inventory of Barratt Developments had marginally exceeded its level in 2007. The value of

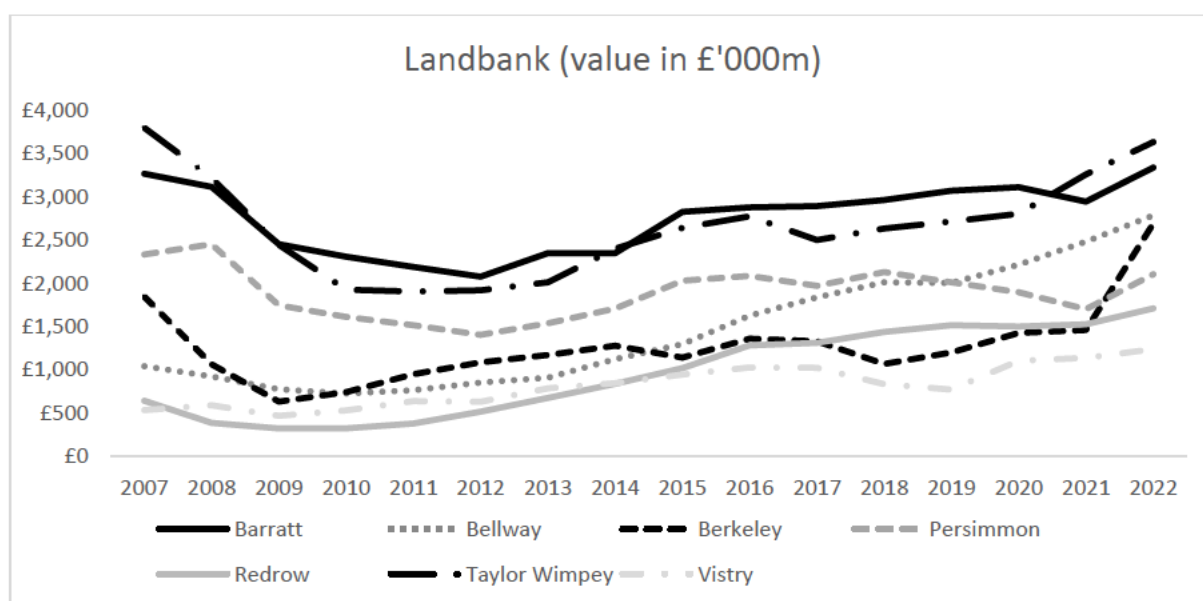
<sup>2</sup> Details of the two residential land value indices can be found at <https://www.savills.co.uk/insight-and-opinion/research-consultancy/residential-indices.aspx#development-land> and <https://content.knightfrank.com/research/161/documents/en/uk-res-dev-land-index-q4-2022-9926.pdf>



Taylor Wimpey’s land inventory in 2022 is slightly below the comparable figure for 2007. In contrast, the value of Persimmon’s land inventory is 23% lower than it was in 2007 and has declined slightly since 2018.

The main growth in the value of land inventories has occurred in the smaller listed housebuilders. As Bellway have nearly doubled their completions since 2012, the value of the land inventory has grown from around £0.85 billion in 2012 to nearly £2.8 billion in 2022 and was significantly higher than Persimmon’s (£2.1 billion in June 2022) land inventory. Similarly, at £2.7 billion in 2022, with substantially fewer completions, the value of Berkeley Group’s land inventory also comfortably exceeds the value of Persimmon’s.

**Figure 5**



Overall, for the three largest housebuilders (relative to completions), there is little evidence of any significant changes in their land inventories since the OFT report in 2008 that would suggest a major change in their market power in the housing land market. In relative terms, both Persimmon and Barratt have less capital tied up in their land holdings compared to Taylor Wimpey. The differences between the strategies towards land inventories among the large, listed housebuilders are indeed notable. In contrast to the three largest housebuilders (as measured by completions), the most significant changes have been in the smaller listed housebuilders (Redrow, Bellway and Vistry). As their numbers of completions have grown since 2007, their land inventories have also expanded. For Vistry, this has occurred through acquisition of smaller housebuilders. For Bellway, the growth in its land inventory is in line with the growth in its completions. Given the scale of their short-term land holdings compared to their completions, the Berkeley Group, the largest listed housebuilder in terms of market capitalisation, stated in their annual report that their operating model is “land-led”. However, their

relatively high focus on large, long-term regeneration sites in brownfield locations also differentiates them from the other volume housebuilders.

There is evidence from the US that housebuilders increasingly perceive the inventory risks associated with tying up capital in their land holdings as a drag on their financial performance. In the US, there seems to be a shift by the largest volume housebuilders towards, what are termed, ‘land light’ or ‘asset light’ strategies. Having sold 81,965 dwellings in 2021 accounting for approximately 10% of total completions in the US, DR Horton owned 127,800 land lots representing 1.6 years of land required at prevailing sales rates. In 2013, the equivalent figure was 5.2 years of land required at prevailing sales rates. In contrast, in 2021 DR Horton *controlled* 402,400 plots. DR Horton set out the risks of their land inventory which is worth quoting at length in this context.

“Inventory risks are substantial for our...businesses. There are risks inherent in controlling, owning and developing land. If housing demand declines, we may not be able to build, sell and rent homes profitably in some of our communities, and we may not be able to fully recover the costs of some of the land and lots we own. Also, the values of our owned undeveloped land, lots and inventories may fluctuate significantly due to changes in market conditions. As a result, our deposits for lots controlled through purchase contracts may be put at risk, we may have to sell or rent homes or land for a lower profit margin or record inventory impairment charges on our land and lots. A significant deterioration in economic or homebuilding industry conditions may result in substantial inventory impairment charges.” (DR Horton, 2022, 16)

Echoing Barratt’s acquisition of Gladman Land and Miller Homes’ acquisition of Wallace Land Investments, in 2018 DR Horton acquired Forestar, a publicly traded master development company with operations in 56 markets across 23 states. The rationale seems clear given that, of the 15,915 lots that Forestar sold in 2021, 14,839 were sold to DR Horton.

This pivot towards ‘land light’ operating models by the US leading volume housebuilders (e.g., DR Horton, Lennar and Pulte) has been facilitated by and, in turn, stimulated the growth of new intermediaries in the housing land market known as lot bankers. This relatively new kind of participant in the housing land market has emerged to supply the demand from US volume housebuilders for, what could be characterised as, ‘just-in-time’ delivery of serviced development lots or parcels to major housebuilders. Following payment of an option premium by the housebuilder to the lot banker, housebuilders have options to purchase serviced development plots from lot bankers at fixed prices and fixed dates. Private equity funds such as Jen Partners and Terra Firma are present in the lot banking sector. For Terra Firma,

“US Land/Lot Banking represents a large and growing market opportunity for TFCC to take advantage of public and large private homebuilders’ desire for asset-light balance sheets, just-in-time inventory and efficient use of debt facilities.”<sup>3</sup>

Illustrating the interlinkages between institutional investors and private equity funds, following previous investments in JEN Partners’ lot banking funds, in August 2022 MassPrim<sup>4</sup> invested \$100 million in one of JEN Partners’ new lot banking funds.

This innovation in the land market has been associated with a significant shift in the land strategies and inventories of the largest, listed US housebuilders. As noted below, a structural trend in the US residential development sector has been the increasing market dominance of both Lennar and DR Horton. Including Pulte (the third largest developer), changes in the land inventories of the three US largest listed housebuilders are assessed in the context of changes in their output. Drawing upon data extracted from their annual reports, Figure 6 displays the numbers of completions per annum for these firms since 2008. Figure 6 is consistent with the market share’s of two largest residential developers diverging from the others in the last decade. The familiar pattern of supply peaking prior to the global financial crisis in 2005-2006 is illustrated. However, a notable trend has been how DR Horton and Lennar have substantially exceeded their pre-global financial crisis output in the last decade. In contrast, Pulte’s output peaked at nearly 46,000 closings in 2005 and was still 36% below this peak in 2022. This is consistent with Ahluwalia *et al.* (2022) who found that DR Horton and Lennar<sup>5</sup> had increased their share of the output of the largest 10 housebuilders from around one third to approximately one half. In the UK, by 2022 the output of the three leading housebuilders (Barratt, Persimmon and Taylor Wimpey) was slightly lower than its pre-global financial crisis peak in 2007. In contrast, in the UK, the proportion of completions by the largest three housebuilders (Persimmon, Barratt and Taylor Wimpey) as a proportion of completion has slowly decreased since 2009 from 77% to 63% of completions by the leading seven listed housebuilders.

In their annual reports, when reporting on their land inventories, it is notable that US housebuilders do not make the same distinction between short-term and strategic land holdings that is standard for the large, listed housebuilders in the UK. In the UK, whether a site has planning consent tends to be the key criterion. For US housebuilders, in their annual reports the main binary distinction is whether land lots are owned or controlled. It is notable that the planning status of lots is rarely commented upon in

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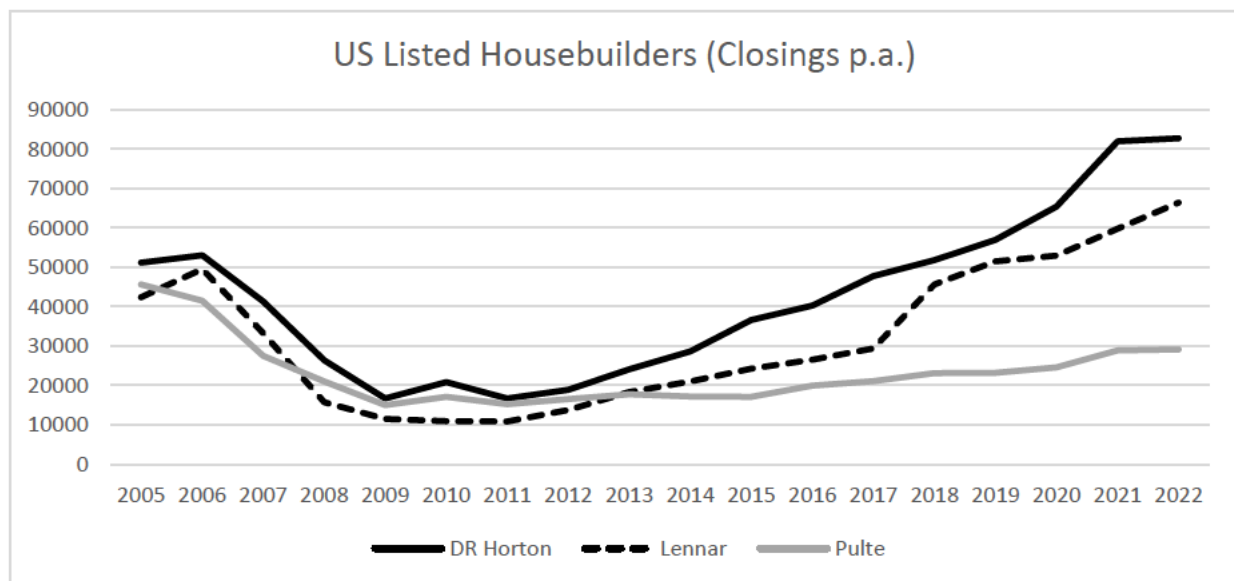
<sup>3</sup> This quotation was extracted from a Terra Firma presentation. The presentation can be viewed at <https://www.tfcc.ca/wp-content/uploads/2021/07/TFCC-Marketing-Presentation-June-2021-7.20.21.pdf>

<sup>4</sup> Massachusetts Pension Reserves Investment Management (PRIM) Board manages the assets of a public employees’ pension scheme. As of June 2022, it had approximately \$92 billion of assets under management.

<sup>5</sup> The relatively large increase in closings between 2017 and 2018 is primarily due to Lennar’s acquisition of CalAtlantic (a national housebuilder) in February 2018.

the annual reports of the US housebuilders<sup>6</sup>. Similar to the UK, controlled land or lots are typically lots on which the housebuilder has an option to purchase in the future. However, following the discussion above, in the US the use of option agreements seems to be very different to the UK. In the UK, the housebuilder typically exercises their option to buy sites when an outline planning consent is obtained with an option period of five years being common. In the US, housebuilders typically can exercise their option to buy lots just before the commencement of construction according to pre-agreed take-down schedules. If sites were controlled in this way in the UK, they would be classified as short-term land holdings.

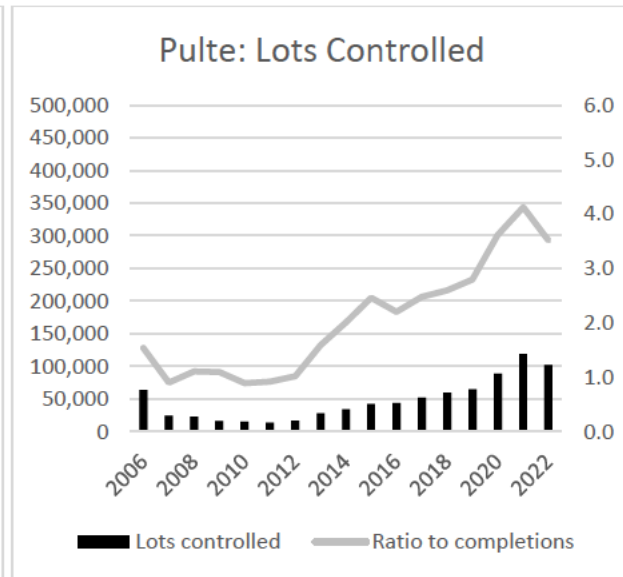
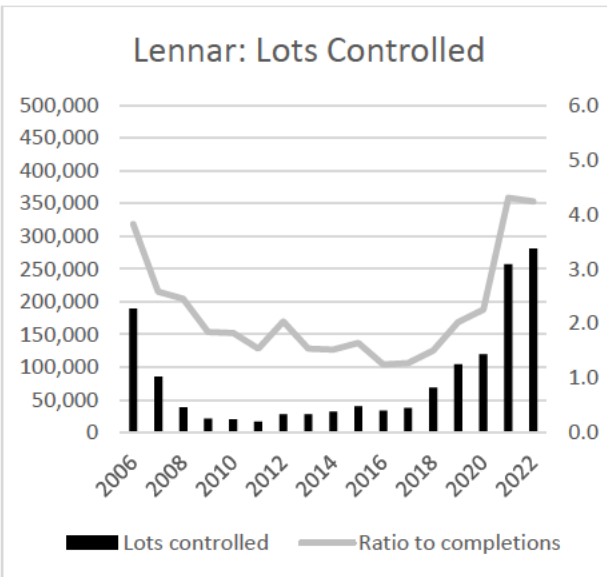
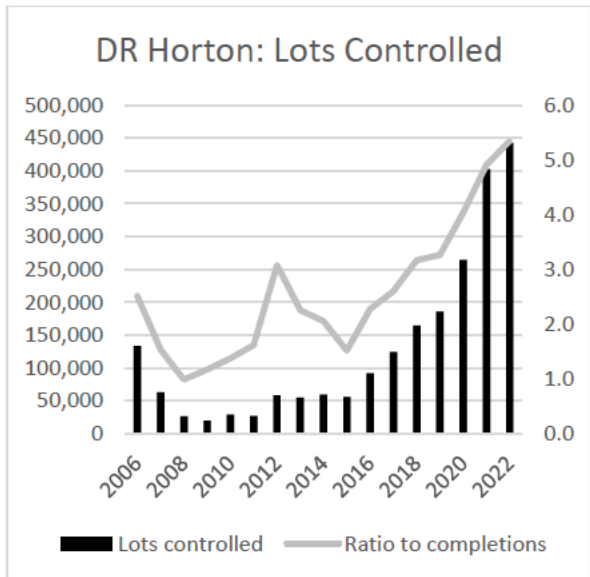
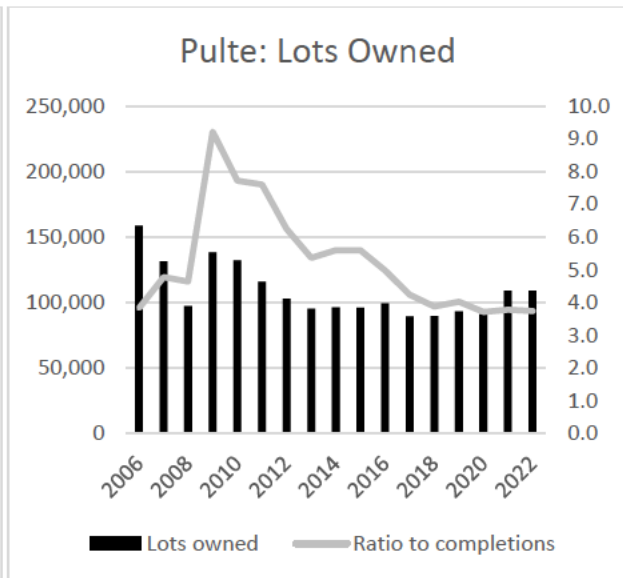
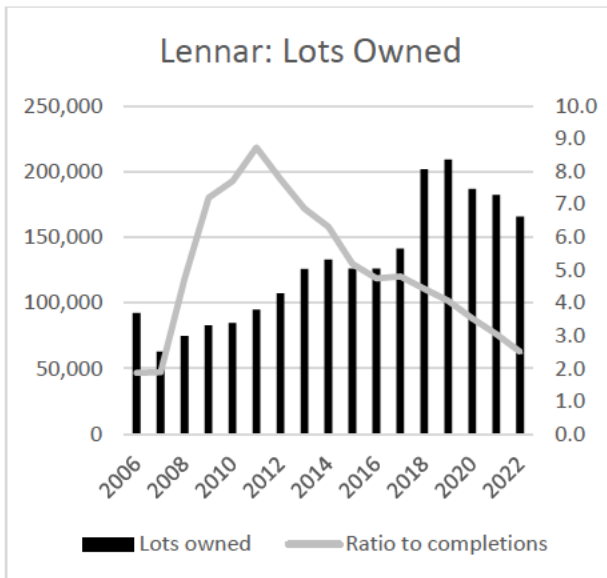
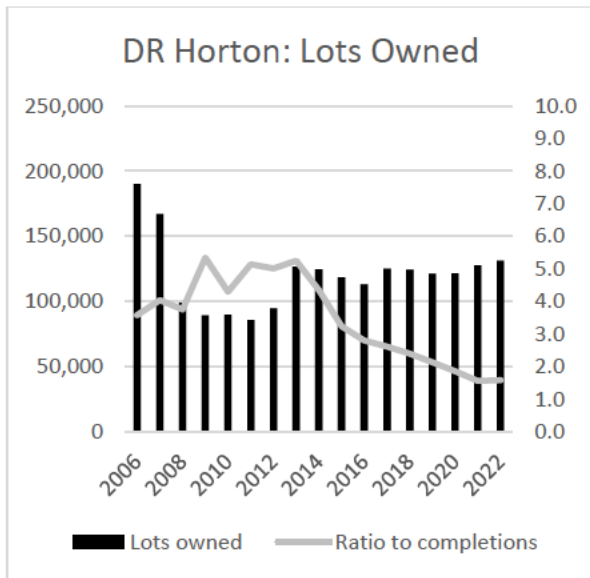
Figure 6



There are two main advantages to acquiring development sites using options from the US housebuilder’s perspective. Much of the inventory risk associated with market volatility, particularly downside risk, is transferred to a third party (often a lot banker) since housebuilders can decide not to exercise their option to acquire lots in the event of falling house prices and/or demand. In addition, option agreements provide for payments for land are phased and paid later as the site is built out rather than in advance of the commencement of build-out. The cost for these benefits to housebuilders is the price of the option payments which will, all else equal, increase their total development costs. When making this trade-off between the additional costs of option payments and delayed land payments and the option not to exercise, the US housebuilders repeatedly assert that, in addition to reducing their inventory risks, their rate of return on investment is increased. The option payment can be framed as

<sup>6</sup> In the annual reports of the US housebuilders, occasionally reference is made to the proportion of lots that are ‘developed’. This seems to refer to whether the lots have appropriate services and site preparation for construction.

**Figures 7-12**

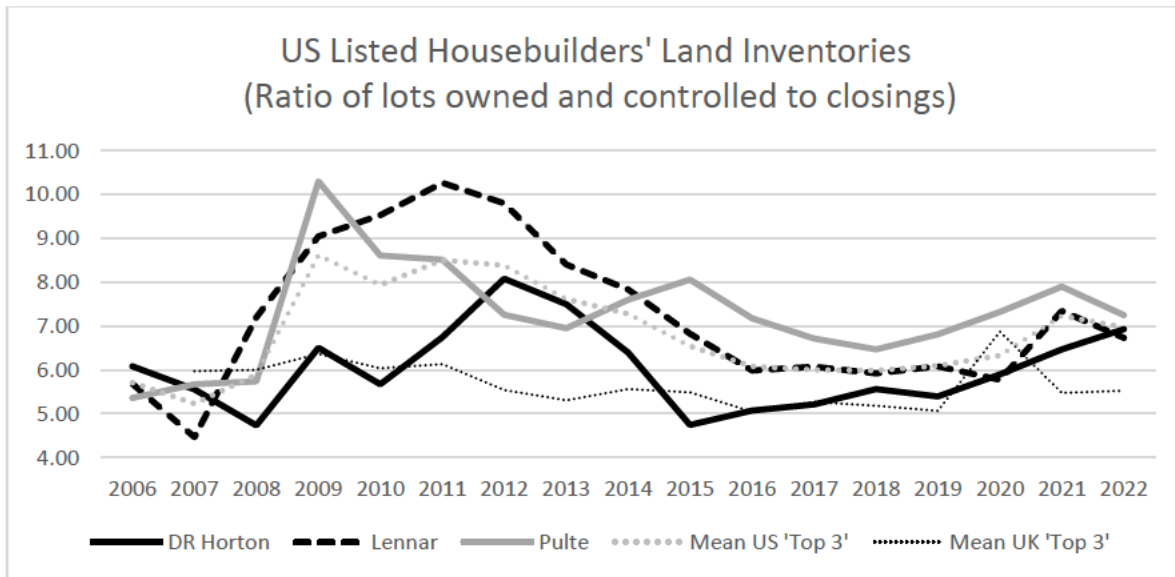


the price that US housebuilders are prepared to pay to avoid the inventory costs associated with committing capital in owning land prior to build out. Consequently, a significant residential land market trend in the US over the last two decades has been a major shift from owning to controlling their development land pipeline through option agreements with lot bankers.

Figures 7 to 12 display the numbers of lots owned and controlled by DR Horton, Lennar, and Pulte between 2006 and 2022. As stated, the broad trend has been a shift from owning lots in their land inventories to controlling them through option contracts. DR Horton have been at the forefront of this shift. At the time of the global financial crisis and its short-term aftermath, they typically owned 75%-80% of their land lots. Since 2016, this proportion has fallen steadily and, by 2021 and 2022, their portfolio of owned land lots accounted for less than a quarter of their land inventory. As a result, by 2022, owned land accounted for 1.6 years of supply of lots as a proportion of completions compared to 5.3 years in 2009. In 2009, controlled land lots accounted for 1.2 years of completions in that year when the comparable figure for controlled lots in 2022 was 5.3. Although they have transitioned later and to a lesser extent, the trajectory of Lennar's and Pulte's land inventory has been similar in this respect.

Whilst there has been a major shift in the structure of the land inventories of the largest US volume housebuilders, there has been relative stability in the relative size of their land inventories. Figure 13 displays the ratio of total lots (owned and controlled) in the land inventories of DR Horton, Lennar and Pulte between 2006 and 2022. As noted earlier, the size of land inventories in the UK has been and continues to be a source of debate and considerable controversy. However, the data in Figure 13 would suggest that the *short-term* land inventories held by US housebuilders have been and are often significantly larger as a proportion of their output than their counterparts in the UK. The initial divergence between the short-term land inventories of the US and UK volume housebuilders can be largely explained by the higher rate of decrease during the global financial crisis in closings compared to lots owned and controlled by the US developers. Between 2007 and 2012, total closings by the US 'Top 3' fell by 70% whilst their total number of lots owned and controlled fell by 34%. Completions by the 'Top 3' UK volume housebuilders fell by 30% in this period with the number of plots in their short-term land banks also falling by 34%.

Figure 13



Data on the land holdings of house builders outside of the US and UK tends to be thinner. There has been research published on the land banks of the listed Australian residential developers). Drawing upon the annual reports of the eight largest publicly-listed residential developers, Murray (2020) analysed data on their stock of residential lots approved, or zoned for residential use for the period 2004-2018. With quite a lot of variation between the eight listed residential developers, Murray (2020) estimates that the average land banks contained 13 lots for every completion. This ratio ranged quite widely among individual companies from an average of six years' supply to 17 years. Such large land banks in relative terms are not unique to Australia. For instance, according to their annual reports both of Ireland's largest listed house builders, Cairn and Glenveagh completed 1,526 and 1,358 units in 2022 reporting land banks with 16,800 and 15,000 plots respectively. The use of terms such as 'available' to describe the plots suggests that they would be classified as short-term rather than strategic land in a UK context. Compared to the approximately ten years' supply of plots in the land banks of the largest Irish developers, the short-term land banks of the UK house builders seem relatively low rather than abnormally high in comparison.

### Concluding Remarks

The land banking debate in the UK has been centred on whether housebuilders hold excessive land inventories for potentially anti-competitive and/or speculative reasons, or if their land holdings are necessary for efficient supply chain operations. It is important to note that these strategies are not mutually exclusive, and it would be unrealistic to assume that large volume housebuilders would not leverage their power in the land and residential markets to boost their financial performance and outperform competitors. Given that observations are likely to be influenced by pre-existing beliefs,

prior knowledge and a range of incentives, the empirical findings presented above are cautiously interpreted below. To start, some stylised, albeit potentially obvious, facts are proposed.

The ownership and/or control of potential housing development sites by housebuilders can serve a number of purposes for housebuilders. Firstly, it ensures that their competitors cannot develop them. Secondly, development sites are investment assets in their own right with the potential to generate both significant financial gains and losses for their owners. At the same time, acquiring housing development sites can be a lengthy, competitive, complex, and uncertain process. Typically, many sites cannot be developed immediately following acquisition tying up capital for extended periods. Whilst it may be operationally and logistically sensible for residential developers to hold an inventory of sites that can be developed in the short-term, doing so comes with opportunity costs and risks.

The evolving structural change in the land holdings of US housebuilders towards strategies that require less capital, known as capital-light or land-light strategies, indicates that land investment may not be significant element of their business strategy, if it ever was. Although the relative size of their land inventories are typically larger than that of the leading UK housebuilders, the US housebuilders have increasingly relied upon short-term option agreements, rather than owning land outright, to secure their short-term pipeline of development land. While it is possible that the scale of the US housebuilders' land inventories could be driven by anti-competitive motives, this seems unlikely due to the costs associated with securing option agreements.

Although the evidence is limited, it generally indicates that UK housebuilders tend to have smaller land inventories relative to their output compared to residential developers in the US, Australia, and Ireland. Although not conclusive, this finding challenges arguments that specific features of the UK planning system compel UK housebuilders to hold excessively large land inventories. Except for Berkeley, most UK housebuilders have maintained relatively stable short-term land banks since 2007.

Since 2007, it is notable that the UK volume housebuilding firms have been reporting more detail of their strategic land banks. There seems to be more variation here between the firms in their focus on strategic land. Their annual reports show a clear trend of them emphasising and tracking the growing share of their short-term land supply pipeline generated from their strategic land portfolios rather than from the purchase of sites with planning consent in place. However, assuming that most of the strategic land is controlled through option agreements rather than being owned, in this particular context increases in land prices are not in the interest of housebuilders who have the option to purchase land at a discount to the future market value. The more that these prices grow, the more they have to pay to exercise the option. Whilst option agreements also prevent competitors from acquiring these sites, it is also important to bear in mind that these sites invariably lack planning consent, which is the main reason that housebuilders use option agreements in the first place. Despite this trend toward 'farming' strategic land to convert it to 'short-term' land, the market for strategic land remains comparatively opaque. High



quality data on the proportion of strategic land controlled by housebuilders through option agreements, as opposed to ownership, is not readily available. Indeed, there have been repeated calls for greater transparency regarding the prevalence of option agreements in the land market.

Finally, it is noteworthy that the two largest housebuilders in both the UK and the US (Barratt and DR Horton) have, the last five years, both acquired major independent companies specialising in land promotion and/or master development (Gladman Land and Forestar) in their respective national markets. The largest private equity owned housebuilder in the UK (Miller Homes) has also acquired a significant land promotion business (Wallace Land) in that period. The acquisitions have certainly increased their market share in their respective strategic land markets. If this represents a trend, such vertical integration would be expected to reduce the number of participants in the land market.

## **References**

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