Breaking the Bottlenecks

Reforming ‘anti-supply measures’ to support urban housebuilding

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Executive summary

Building 1.5 million new homes in England over this Parliament is at the core of the Government's economic strategy. They are right to do this. The IMF has stated that planning reform is the top priority for economic reform in Britain.[1] Yet despite an ambitious agenda, there is widespread concern that this target will be missed, particularly in London and other urban areas.

The Government has blamed "anti-supply measures" that they inherited from the previous Government for these difficulties. There is much truth in this. The previous Government's removal of housing targets, changes to the National Planning Policy Framework (NPPF) that weakened local plans, and the strengthening of the green belt caused applications and construction to stall. The current Government has reversed these measures and is already seeing confidence return to the sector. The OBR has estimated that these changes alone will add 0.2 per cent to GDP and £3.1 billion to the Government's fiscal headroom by 2030.[2]

Other "anti-supply measures" remain unaddressed. Restrictions on development have accumulated over decades, and more will need to be removed if the Government is to reach the highest rate of housebuilding since the Thatcher Government and achieve its target.

The current 'bit-by-bit' strategy of planning reform only increases the pressure on these restrictions. As the Government has, for now, ruled out a shift from England's current discretionary system towards a flexible zoning system like that of other developed countries, finding ways to unblock housebuilding rapidly within the current system, such as through the forthcoming 'Brownfield Passports' agenda, is even more important.[3]

Cities are a top priority for planning reform. Urban housebuilding has outsized economic benefits but is particularly difficult under the discretionary planning system. It now also faces especially stretching targets, with London now required to build at twice the rate of its peak performance since the passage of the Town and Country Planning Act 1947. If the Government fails to meet its national housing target, it will be due to a failure to build enough in cities, particularly the capital.[4]

1 IMF (2024), United Kingdom: Staff Report for the 2024 Article IV Consultation, IMF Country Report No. 24/203; Carella, A et al. (2024), Construction Planning Reforms for Growth and Investment: United Kingdom, IMF, SIP/2024/031, IMF Country Report No 24/204

2 OBR (2025), Economic and fiscal outlook: March 2025

3 Breach, A. (2024), A zoning system for England, Centre for Cities

4 Breach, A. (2024), Restarting housebuilding I: Planning reform and the private sector, Centre for Cities

This report identifies five anti-supply measures introduced under the previous Government that should be reviewed in the national planning reform agenda and the new version of London Plan. Each of these measures fails to achieve their stated purposes and impose significant unintended consequences upon urban housing supply, affordability, and quality.

The briefings present two possible options for reform for each of the five measures:

1. **Minimum space standards for one-bed flats:** reduce from 37m^2 to either **25m^2,** or, **18m^2.**
2. **Dual aspect and overheating regulations:** remove contradictory requirements for cross-ventilation in London, and/or, allow air conditioning to meet overheating requirements.
3. **Dual staircase requirements in residential buildings at 18 metres:** re-legalise single staircase residential buildings up to **30 metres**, or, **50 metres.**
4. **The Building Safety Regulator:** increase the height limit for special high-rise building control from 18 metres to **either 30 or 50 metres,** and/or, return building control for high-rise buildings back to local planning authorities.
5. **Biodiversity Net Gain:** reduce the costs on brownfield sites, or, remove it from brownfield sites entirely.

This report first sets out the principles for identifying anti-supply measures, then explains in detail why each anti-supply measure is so problematic for urban housebuilding, before illustrating their costs with a case study of a proposed building in the Cockfosters station development.

Crucially, the measures' restrictions interact with one another, so reform across all of these measures would have a far greater impact than changing any of them individually.

The introduction of four of the five anti-supply measures since the original planning application was approved has chopped the height of feasible designs for the Cockfosters building and reduced the number of possible new homes provided from 107 to 47. Conversely, reform across the anti-supply measures could increase the number of new homes in the original design up to 214, while also legalising taller designs on a similar footprint that could include up to 300 homes.

Change on this scale is necessary for cities to play their role in helping the Government reach its national housebuilding target of 1.5 million new homes in this Parliament.

01

How to identify anti-supply measures

Lots of different regulations restrict development. This is often intentional and desirable. The best regulations are those that, at little private cost, either reduce costs to wider society (e.g. drainage requirements) or address imbalances in information between developers and occupiers (e.g. ensuring the building is structurally sound). Not all regulations are so efficient, and some impose large costs upon developers and wider society for minimal or no benefit.

Regulations that reduce supply without public benefit can be described as 'anti-supply measures'. The Government has previously used this term to describe reforms under the previous Government that reduced housebuilding.[5] If more anti-supply measures can be quickly identified, then the planning reform agenda can continue to make progress and contribute to the Government's economic growth mission.

Yet this is not a trivial task. Some changes will be contentious – one person's anti-supply measure is another person's important protection. There will also be claims that reform of these measures will not have any effect on housebuilding this Parliament – these are addressed in Box 1, below.

To make a politically defensible case for reform, the Government needs a framework to identify the most promising areas for reform. This should be based on the following principles:

- **Struggles to meet its stated rationale.** Many regulations impose costs but function as intended. For example, restrictions on development to protect sightlines of St. Paul's Cathedral do provide unobstructed views of St. Paul's Cathedral from certain locations. Their defenders will be perfectly within in their rights to say such regulations are achieving their purpose. Much harder to justify are those interventions that may sound beneficial but do not achieve their purpose, such as the notorious £100 million Bat Tunnel for HS2 that struggles to protect bats. Even if these regulations sound desirable or comply with existing bureaucratic processes, the costs they impose are less easily defended and they should be reconsidered accordingly.

5 Housing, Communities and Local Government Committee Oral evidence: Planning for 1.5 million new homes, HC 432, 20th November 2024; Hansard HC Vol. 758 HCWS308, 12 December 2024

- **Imposes large unintended consequences.** Some regulations are expensive to comply with, but their costs are predictable and certain. For example, when eventually introduced, the Building Safety Levy will impose a one-off cost per square metre linked to local land values, which will be absorbed by developers. In contrast, more complex interventions, such as Industrial Development Certificates after the Second World War, often induce unpredictable responses that can be much greater than initially expected.
- **International best practice differs.** If other countries with better outcomes are making different choices, then this shows the UK can change its own regulations safely.

Using these principles, five different anti-supply measures can be identified:

1. Minimum space standards for one-bed flats.
2. Dual aspect and overheating regulations.
3. Dual staircases requirements in residential buildings.
4. The Building Safety Regulator
5. Biodiversity Net Gain.

The next section will explain the cost each anti-supply measure is imposing on urban housebuilding across the country. These five regulations apply across England – with the partial exception of London's dual aspect requirements – and have a particularly restrictive impact on urban housebuilding. Much of the evidence available is from London due to the capital's size and the scale of its housing and planning issues. Given relatively flat construction costs between cities and much greater variations in land values, these issues will often be even more challenging for development viability in other cities in England.

Box 1: Why does reducing construction costs matter?

One response to these proposals is that they will not increase development as lower construction costs will simply be absorbed into a higher price that developers pay for land. Even leaving aside how specific regulations can reduce quality, contradict each other, or make building certain types of urban housing unfeasible in a legal sense, this view understates how lower construction costs can make more projects viable in a business sense.

Higher construction costs reduce the cost of land only when developers buy it. If they have already bought land and construction costs then increase, sites can "stall" as construction is no longer profitable for the developer despite holding a planning permission. As construction costs for housing increased by 31 per cent from January 2020 to January 2025, many sites across England have stalled.[6]

6 ONS 2025, Construction Output Price Indices (OPIs), Quarter 4 (October to December) 2024

To restart construction on these sites, the only options are either 1) house prices increase enough to make up for the higher construction costs, 2) factors that affect viability are negotiated away, 3) the developer sells the land at a loss, or 4) construction costs are reduced. These trade-offs are inescapable whether the developer is private or public.

As the anti-supply measures are fixed matters of regulation, negotiations between a planning authority and developers to improve the viability of development must at present focus on costs that are flexible. In practice, this means that higher construction costs squeeze developer contributions (typically known as Section 106) and affordable housing requirements.

Reducing construction costs will have an outsize impact on increasing housebuilding in the short-medium term, as it will reactivate stalled sites that already have planning permission. Lowering costs also has the straightforward and **permanent benefit** of increasing viability and potential land value capture across all sites.

02

Minimum space standards for one-bed flats

- **Rationale:** Improving the quality of new housing by requiring all new flats to provide lots of space.
- **Definition:** In 2015, the nationally described minimum space standard for one-bed flats designed for one person were set at 37m^2 in all residential use class developments,[7] following the London Housing Design Guide published in 2010. These space standards are adopted in local plans across England and the London Plan, and are required in permitted development conversions nationwide. As purpose-built student accommodation and co-living class are technically in a different use class, they are exempt from space standards.
- **Problem:** A minimum space standard of 37m^2 for one-bed flats for one person results in flats that are too big for single people to afford.

When deciding where to live, households spend their income on three basic factors – location, quality, and size. People's requirements differ, and somebody who really wants to live in an expensive location in a decent quality apartment will often be prepared to live in a small flat to achieve this. Some people, particularly in cities, will prefer to live in homes that are smaller than the average at some point in their life, so long as they are high quality and in their desired location.[8]

Space standards differ by type of dwelling according to how many residents they are expected to have. For one-bed dwellings, which are particularly important for urban housing needs, there are two space standards: 50m^2 for two people, and 37m^2 for those for one person.

It is understandable that policy wants to increase space for people. However, the 37m^2 threshold creates the following problems:

- **The 37m^2 minimum is 50 per cent larger than what the average renting Londoner can afford.** Research from the GLA shows that the average London private renter in 2018 consumed 25m^2 of floorspace, with the average rising to 29m^2

7 CLG (2015), Technical housing standards – nationally described space standard

8 Thomas E. et al. (2015), Urban demographics: Why people live where they do, Centre for Cities

across the whole of England.[9] Even when 37m² flats are built, rents are so high that most London renters do not have the income to live in them alone without subsidy.

- **The London Housing Design Guide shows that of this 37m², 12m² (i.e. the 50 per cent) is specifically intended for a sofa and TV area.**[10] This requirement predates the rise of widespread streaming of television and film on laptops and tablets, with Netflix's streaming service launching in the UK two years after this standard was set in 2010.
- The design of the standards creates a further mismatch – **the incentive is to build one-bed flats that are large enough for couples at the space standard of 50m², or in per person terms, 25m² each.** As 37m² flats are expensive for singles but also too small for couples, developers tend not to build them.
- **The result is that most new housing is at least twice as big as what the average single household can afford.** For example, even though the Census 2021 reported that 29 per cent of households in London are single households, only 17 per cent of new homes in the capital are below 50m².[11]

The minimum space standard regulates new supply, but it also has a significant impact on housing *demand*. Single people are unable to buy or move into new housing as they cannot afford anything which is built. This in turn prevents housebuilders from supplying homes to meet demand from this part of the population.

One response might be that we should be prioritising homes for families instead. Yet as few desirable and affordable one-bed flats are available, working adults are forced to house-share these new family-sized homes. If many more one-bed flats that singles could afford were built, allowing many of these house-shares to dissolve, the family homes they occupy would be released back into family uses.

These nationally described space standards have no relation to policy on overcrowding. The latter concerns poverty rather than construction, and has a different statutory basis (the Housing Act 1985) that would remain unchanged even if the space standards were altered. A single person can live in a flat smaller than 37m² and not be overcrowded, while a family can live in a flat that does comply with the space standards and nevertheless still be overcrowded.

There are two exceptions to the space standard: student accommodation and 'co-living'. Technically, neither of these are 'residential' according to the use class order and so are exempt. The proliferation of these schemes across England – and high rents per square metre – suggests that student housing and co-living developers are at least partially trying to fill a gap in the market for accommodation in small flats that the space standards have outlawed.[12]

9 Gleeson, J. (2021), An analysis of housing floorspace per person , Greater London Authority, Housing Research Note 06

10 Mayor of London (2010), London Housing Design Guide: Interim Version. The London Housing Design Guide from 2010 is not to be confused with the London Housing Design Standards of 2023.

11 Breach, A. (2020), Minimum Space Standards make the housing crisis worse – here's why, Centre for Cities

12 Wellman, P. (2022), Spotlight: UK Co-living – A market poised for huge growth, Savills Residential Research; Beagley, L. et al (2025), Spotlight: UK Co-Living 2025, Savills Residential Research

This is further supported by a new set of space standards for co-living introduced in London last year that states co-living units must be between 18 to 27m^2. Implicitly, this recognises that the current 37m^2 space standard is too high to comfortably house everyone in London; yet it still leaves a 'dead zone' of flats between 27m^2 and 37m^2 that cannot be lawfully provided in the capital.

International best practice:

England's one 37m^2 one-bed space standard is high by international standards. In Japan, where housing is much cheaper due to higher supply, the space standard is 25m^2, having increased from 18m^2 in 2011.[13] In Spain and Italy the space standard is 20m^2, after Italy decreased it from 28m^2 in 2024.[14] In the Netherlands, the space standard is 18m^2, and in France the space standard is 14m^2.[15]

Actual space consumed per person varies much less between developed countries than space standards. Space per person (including homeowners) in London, Tokyo, and Paris is around 31 m^2. [16] This reflects the fact that living space per person is ultimately determined by income rather than space standards.

Options for reform:

The one-bed for one person space standard needs to be reduced from 37m^2 to make new housing in cities affordable to single people. An appropriate space standard would support both the supply and the demand sides of the urban housing market.

The biggest benefit of lower space standards is that they are a demand-side policy that decreases house prices. Other demand-side policies, such as Help to Buy, support housing transactions through subsidies to increase households' purchasing power, but also thereby increase prices and reduce affordability for others.

Lower space standards would increase households' purchasing power by bringing new flats in reach of the budget of single people. Transactions would increase, unlocking stalled sites and supporting housebuilding activity, without increasing prices or incurring fiscal outlays from the Exchequer.

On the supply side, developments would be able to support more smaller one-bed dwellings than they do currently, which would mean each planning application would make a greater contribution to the national 1.5 million target.

13 Center for Better Living (2024), A Quick Look at Housing in Japan (2023-2024) ; MLIT (2011), 住生活基本計画(全国計画)
14 Piotti, K. (2024), 'Decreto Salva Casa 2024: cosa prevede e quando entra in vigore', Milan Design Week
15 Apolloni, L. and D'Alessandro, D. (2021), Housing Spaces in Nine European Countries: A Comparison of Dimensional Requirements, International Journal of Environmental Research and Public Health, 18(8), 4278
16 Gleeson, J. (2019), Housing in four world cities: London, New York, Paris and Tokyo, GLA, Housing Research Note 03

The size of these benefits will increase the lower the space standard – this is why the former principal urban planner of the World Bank Alain Bertaud has called for space standards to be set to zero. The Government has though two clear options for setting a new space standard for one-beds for one person:

- **Moderate –** 25m^2 is the average amount of space currently consumed by London renters, is at the upper end of London's space co-living space standard, and is the current space standard for one-bed flats in Japan.
- **Bold –** 18m^2 is the current minimum space standard for co-living in London, would close regulatory arbitrage of co-living and student flats with residential flats, and is the current space standard in the Netherlands and above that in France.

Crucially, much of the benefit of a lower space standard would come from new flats that are above the new space standard of 18/25m^2, but are below the current space standard of 50m^2 of one-beds for two people. The aim of space standards reform is not to provide flats that are as small as possible but to remove barriers that are reducing choice, affordability, and housebuilding.

03

Overheating and dual aspect

- **Rationale:** Keeping new buildings cool in summer when they have high insulation without releasing carbon emissions.
- **Definition:** Approved Document O of the national building regulations and the London Plan Housing Design Standards, in 2022 and 2023 respectively, set out regulations to tackle overheating in increasingly well-insulated new buildings within a warming climate.[17] Both sets of regulations emphasise 'passive' (i.e. non-mechanical) methods, particularly cross-ventilation within dwellings and dual aspect (i.e. windows on different external walls of the dwelling) and reducing solar gain (sunshine indoors). Neither considers air conditioning to aid compliance with the regulations except under exceptional circumstances.
- **Problem:** Passive cooling will struggle to keep buildings cool cheaply, and in London there are now two sets of regulations that contradict each other.

Overheating is a dangerous and growing problem. Climate change is increasing the threat of heatwaves, which can hurt and even kill tens of thousands of people even if they remain indoors. Almost 3,000 people died in the UK due to 'excess heat' in 2022.[18]

The challenge of overheating in Britain is our buildings are built to retain heat in our temperate climate. Energy efficiency regulations for new dwellings now require high insulation and few drafts to reduce the need for heating in winter, but broadly make it harder to cool homes in summer. Residents of cities are particularly vulnerable to overheating due to urban heat island effects.

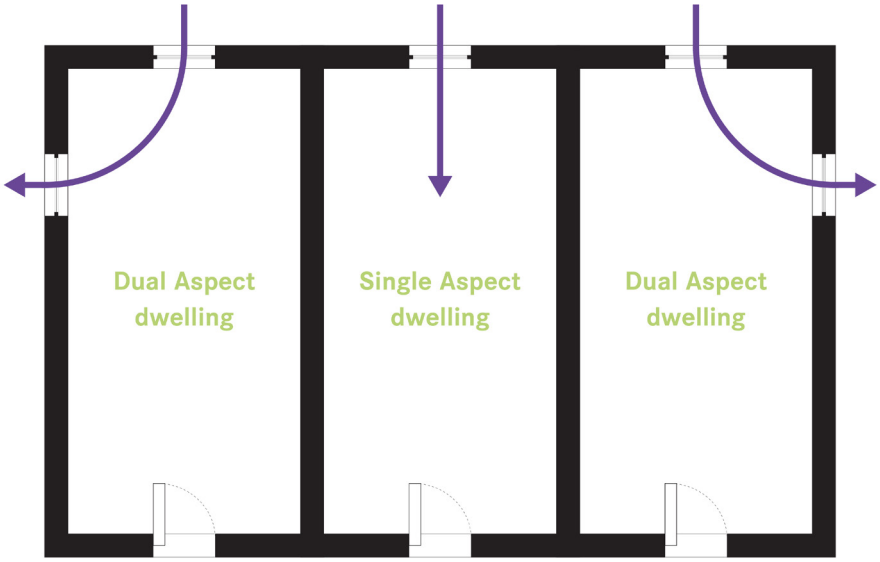
There are two ways buildings can be cooled – mechanical methods (primarily air conditioning) and passive cooling methods that use the design of the building to limit heat gain and retain cooler air inside the dwelling.

Passive cooling is much easier in dual-aspect dwellings with windows on multiple external facades, which as shown in Figure 1, are contrasted to single-aspect flats that face out on to

17 MHCLG (2022), Approved Document O; Mayor of London (2023), London Plan Guidance: Housing Design Standards. The London Housing Design Standards of 2023 are not to be confused with the London Housing Design Guide from 2010.
18 UK Health Security Agency (2025), Heat mortality monitoring report: 2022

only one external facade. Dual aspect allows breezes to blow through dwellings and easily exchange stuffy indoors air for cooler air from the outdoors. Even if outside temperatures are high, cross-ventilation or overnight air exchange and limits to solar gain (daylight indoors) can keep indoor environments cooler than the outdoors.

Figure 1: Single aspect and dual aspect flats

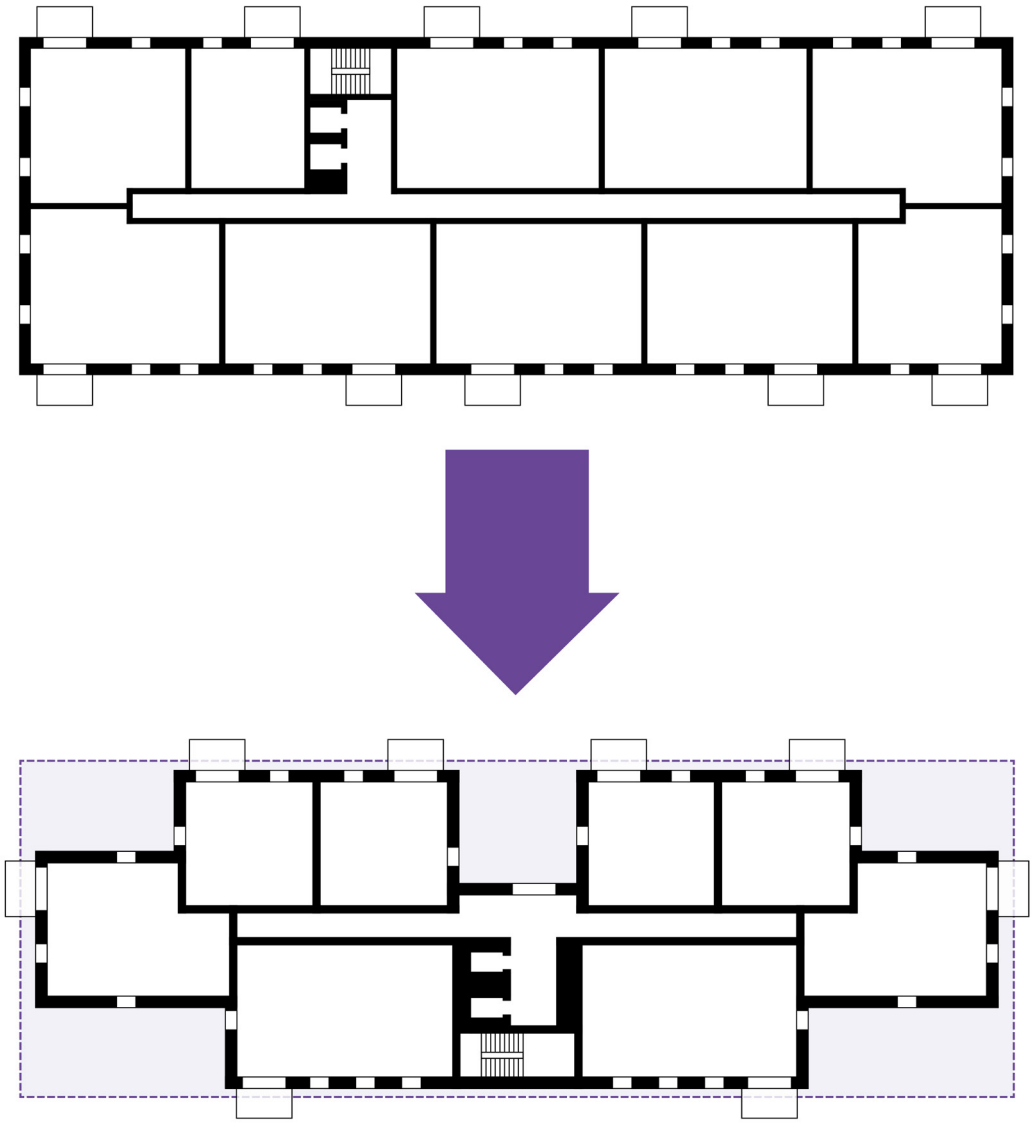


The regulations on overheating in new buildings – the mandate to 'maximise' dual aspect in the London Plan's London Housing Design Standards, and both the simplified (checklist) and dynamic (bespoke computer modelling) approaches in Approved Document O of the building regulations – emphasise passive cooling, with a special focus on dual aspect and cross ventilation.

However, these approaches are creating the following problems:

- **The London Plan's mandate to 'maximise' dual aspect increases costs in apartment buildings that are more than two flats wide** (i.e. have one or more flats between the corner flats). As Figure 2 sets out, 'maximal' dual aspect on square buildings requires external outer walls to be "notched" to cut out a corner for every flat, reducing the saleable floor area for developments and the size or number of flats, as part of the site must be set aside for some empty land to create notches. Notches also make external walls longer and increase their build costs, with some developers reporting increases of 40 per cent.

Figure 2: The effect of maximising dual aspect on floorspace



- **London's overheating regulations contradict national building regulations on overheating.** The London Plan insists dual aspect must be "maximised", and considers corner walls to have achieved it. In contrast, Approved Document O's simplified approach does not require dual aspect, but does not consider dual aspect on corner walls to be cross-ventilated (instead requiring ventilation to occur across opposite walls), rendering the London Plan's approach redundant.
- **Passive cooling requires small windows.** Daylight's heating of indoor spaces – solar gain – needs to be controlled for passive cooling to work. Document O's 'simplified' method manages the heat effects of solar gain by imposing maximum window sizes, with homes in London and central Manchester required to have particularly small windows due to urban heat island effects. The impact assessment for Document O did not score the effect of smaller windows on residents' enjoyment

of their homes, as they were assumed to balance out the benefits of cost savings for developers from reduced glazing.[19]

- **Passive cooling will not work during the most extreme heatwaves.** For example, during England's 2022 heatwave when day-time temperatures breached 40°C for the first time, night time minimum temperatures did not drop below 25.8°C anywhere in England.[20] Unlike air conditioning, passive cooling and overnight air exchange cannot reduce temperatures to a comfortable level at these moments when the risk of overheating is at its most dangerous.

The requirement to maximise dual aspect is particularly difficult to achieve in buildings with dual staircases – as the dual staircases section discusses – and in smaller and more affordable one-bed flats that have less living space to sacrifice to create notches.

These problems emerge from the exclusive focus on passive methods to approach overheating, as policy is neglecting the helpful potential of air conditioning.

Air conditioning is currently only allowed as a means to comply with the regulations on overheating as a last resort when passive options are considered infeasible (e.g. cross-ventilation in an area with heavy noise pollution). This is because air conditioning consumes energy to keep buildings cool and so will currently release carbon emissions. However, the electric grid is being decarbonised, and it is not obvious why spending energy and emitting carbon to keep buildings comfortable is unacceptable in summer but tolerable in winter.

Air conditioning can help play an important role in Britain's path to net zero by encouraging the installation of heat pumps. Heat pumps use the same technology as air conditioning, and reversible air-to-air[21] heat pumps can heat homes in winter and cool them in summer. These reversible heat pumps are particularly appealing for flats.

The Government has committed to rolling out heat pumps, with gas boilers forbidden in new build homes under the Future Homes Standard. Yet despite this, reversible air-to-air heat pumps cannot currently be used to comply with regulations on overheating.

The costs of using air conditioning for cooling appear to be lower than a passive approach. Compared to the high external wall costs and loss of saleable floor area from dual aspect requirements, the Government estimated in 2020 that the cost of installing fixed air conditioning in a 50m^2 flat in the UK to be only £3,080 (£61.61 psm).[22] If reversible heat pumps were installed instead, this could be recouped from the cost required to otherwise install a heating unit.

The Government has recognised that demand for mobile air conditioning units is increasing as households seek cooling during increasingly hot weather. The Impact Assessment for Document O predicts that, even with these regulations, by 2091 domestic air conditioning will be present in 27 per cent and 82 per cent of households in the North and South of England

19 DLUHC (2021), 2021 Introduction of a new requirement on overheating in residential buildings: Final Stage Impact Assessment

20 Burt, S. (2022), Too hot to sleep? Nights are warming faster than days as Earth heats up, University of Reading

21 They contrast to air-to-water heat pumps that are not reversible, and are instead used to heat radiators in traditional 'wet' heating systems that predominate in English suburban housing stock.

22 BEIS (2021), Cooling in the UK, BEIS Research Paper 2021/050

respectively.[23] These mobile units are less efficient than fully fixed units and will consume more energy, similar to how space heaters are less efficient than boilers and heat pumps.

International best practice:

Dual aspect requirements seem to be uncommon abroad. While England uses dual aspect as a tool for cooling, dual aspect in other countries appears to often be a tool for *heating*.

For example, Auckland's design guide recommends dual aspect as a strategy for heating, by maximising solar gain with as many windows as possible.[24] Denmark, the Netherlands, Sweden and Toronto seem to be similar in using light standards rather than dual aspect standards.[25]

Ireland in 2007 introduced "maximum" dual aspect, cross ventilation and solar gain for flats in urban areas. These dual aspect requirements added €25,000 to the cost of building a flat in Ireland. Since then, policy has retreated due to the high costs it imposed – 50% in 2015, diluted further to 33% in urban areas in 2017.[26]

The Government estimated in 2020 that about 5 per cent of British dwellings had air conditioning units, with a minority of those being fixed installations, and fixed installations being split 50:50 between new build and existing properties. [27]

This is below that of other European countries, which are themselves global laggards for adoption of air conditioning. In France in 2020, 25 per cent of households now have air conditioning.[28] In Germany in 2024, 19 per cent of households now have air conditioning.[29] In 2011, 16 per cent of households in Sweden had air conditioning – reflecting high take-up of heat pumps despite a cold climate – as did 14 per cent of Dutch households.[30]

As climate change advances and British summers become increasingly hot, take-up of air conditioning is likely to follow the European and wider global example regardless of the overheating and dual aspect requirements for new dwellings.

Options for reform:

The question for the Government is whether it wants to remain committed to a passive-first cooling standard with air conditioning as a last resort, or change policy to allow air conditioning to play a leading role in cooling domestic buildings.

The first route requires a relaxation in the mandate to maximise dual aspect in the London Plan to resolve its contradiction with the national building regulations. The new London Plan consultation has presented this as an option. However, the passive-first standards would still

23 DLUHC (2021), 2021 Introduction of a new requirement on overheating in residential buildings: Final Stage Impact Assessment
24 Auckland Council (2024), Apartment Design Guidance
25 KPMG Future Analytics (2021), Dual Aspect in Residential Development: An Appraisal of Development Management Standards in Ireland
26 Mitchell, P. (2020), Viability and Feasibility in Planning, Irish Planning Institute
27 BEIS (2021), Cooling in the UK, BEIS Research Paper 2021/050
28 ADEME (2021), La climatisation : vers une utilisation raisonnée pour limiter l'impact sur l'environnement, French Govenrment
29 Wehrmann, B. (2024), 'Use of air conditioning on the rise in Germany as summers become hotter', Clean Energy Wire, 28th June 2024
30 De Cian et al. (2019), Households' adaptation in a warming climate. Air conditioning and thermal insulation choices, Environmental Science & Policy, Vol. 100, pp 136-157

need to limit solar gain with small windows and struggle to manage the most extreme and dangerous temperatures.

Choosing the second route would allow larger windows, increase the incentives for households to adopt reversible air-to-air heat pumps in flats, and increase the efficiency of domestic air conditioning with the adoption of fixed rather than mobile units.

This choice presents two clear options for policymakers:

- **Moderate:** Replace the London Housing Design Standards guidance on dual aspect with Document O's requirements and allow Document O to consider "corner" dual aspect as low risk in their simplified method.
- **Bold:** Allow air conditioning as a means to comply with Document O of the building regulations in the simplified and dynamic methods, and replace the London Housing Design Standards guidance on dual aspect with Document O's requirements. This would in turn enable the removal of limits on window sizes in Document O, including the especially small windows in London.

These options would lead to more single-aspect flats being built, which in conjunction with smaller space standards would allow for more affordable one-bed flats. However, many dual aspect flats can still be provided if the requirement for dual staircases on taller buildings is relaxed, as set out in the next section.

04

Dual staircase requirements

- **Rationale:** Dual staircases are now required in apartment blocks to aid evacuation in the event of a fire, following the Grenfell Tower fire.
- **Definition:** Residential buildings that are defined as higher-risk (18 metres, or six storeys) in the Building Safety Act now require two staircases in Approved Document B of the building regulations.
- **Problems:** The 18-metre single staircase height limit does not improve fire safety, makes mid-rise developments much less financially viable, and limits the ability to satisfy requirements to maximise dual aspect.

Following the catastrophic loss of life in the Grenfell Tower fire on the 14th June 2017, the previous Government committed to improving safety in new high-rise buildings. Both the previous and the current Government are right to want to improve safety in high-rise buildings, and public concerns are understandable.

The purpose of the dual staircase requirement in Approved Document B of the building regulations is that it will aid evacuation in the Government's statutory definition of 'higher-risk' buildings, which are 18 metres (six storeys) tall across all of England. For comparison, Grenfell Tower was 67.3 metres tall (24 storeys).

Research commissioned by the Government indicates that second staircases do not substantially aid evacuation at 18 metres. Modelling suggests second staircases reduce evacuation times by only 6 per cent in buildings 18 metres tall and, by 13 per cent in buildings 30 metres tall, and are very unlikely to help people in such buildings avoid becoming trapped.[31] This is because there are few scenarios in a properly maintained building in which a fire renders only one staircase impassable for a significant amount of time, other than in the very tallest buildings (140 metres in the modelling).

Research suggesting evacuation times fall by 50 per cent with a second staircase describes an experiment where the evacuation takes place exclusively in one staircase while firefighters ascend in the other – a scenario unlikely to occur in reality, and not the current justification

31 Spearpoint, M. et al. (2023), Appendix A3: Quantity Effectiveness of Evacuation Strategies

in the building regulations for a second staircase.[32] Modern fire engines currently in service in London have ladders that can reach up to 64 metres, and can help vulnerable elderly and disabled households that struggle with evacuation from high-rise buildings [33]

Dual staircases in residential buildings were not recommended by either phase of the Grenfell Tower Inquiry. The flammable cladding, dozens of broken fire door self-closers due to neglect by the local authority landlord, an inappropriate smoke control system that failed, and an 80-minute delay from London Fire Brigade in ordering an evacuation were identified as critical factors in the scale of the catastrophe.[34] These factors would still have occurred even if Grenfell Tower had contained a second staircase.

An 18-metre second staircase requirement may not do much to improve fire safety, but it might still be defensible if the cost is small.

Unfortunately, the second staircase requirement is very expensive. Normally, adding one storey onto an apartment building above five storeys increases the cost of every flat in the structure by £600. Recent evidence suggests that the new dual staircase requirement increases the cost of every flat in new apartment buildings by £22,500, including those *below* the threshold.[35] For a building with four flats on each floor and a single staircase, adding the fifth storey would normally cost £14,400 – but the dual staircase requirement means adding a further sixth storey now costs £630,000.

Estimates from the US indicate that dual staircase requirements reduce saleable floor area by 7 per cent, and separately, increase total build costs by 6 to 13 per cent due to the need to provide a new pressurised core. [36] These two blades of a scissor cut the viability of many projects above 18 metres, as developers must pay more to provide less.

The high costs of dual staircase requirements were predicted. The impact assessment estimated that over the next ten years the measure would impose £2.7 billion of costs on society in return for £9 million of benefits – a BCR of 0.0034.[37]

The estimated costs are concentrated in buildings at lower heights. For buildings between 30 to 50 metres, the second-staircase mandate was estimated to produce £626 million of costs for £0.7 million of benefits (a BCR of 0.001). For buildings between 18 to 30 metres, the second stair mandate was estimated to impose £1.2 billion of costs for £0.8 million of benefits (a BCR of 0.0007).

The dual staircase requirement was set at 18 metres for administrative reasons, not because it maximises fire safety. Initially, the Government consulted on setting the threshold at 30 metres (10 storeys), but was convinced to reduce this to 18 metres on the

32 Home Office (2024), Strategies for evacuation of occupants from high-rise residential buildings involved in fire

33 LFB, 64m Turntable Ladders: the tallest aerial appliances in Europe; https://www.youtube.com/watch?v=rxk5J1HEMFw

34 Grenfell Inquiry Report – Phase 1 Paras 23.1-23.61; 28.30-28.55; Lane, B. (2018), Grenfell Tower - fire safety investigation: Phase 1 Report – Section 13 - Critical times during the fire event, BLAS0000013_0001; Apps, P. (2024), 'The Grenfell Tower Inquiry report: what it said about the social housing providers', Peter's Substack, September 17th 2024; Apps, P. (2025), 'The door to Flat 136' Peter's Substack, May 2nd 2025; Young, L. (2018), 'What went wrong with smoke ventilation at Grenfell Tower', CIBSE Journal

35 Clarke, A. (2024), The cost of building a house: How has the thing we need most become unaffordable?, The Housing Forum

36 Smith S. and Horowitz, A. et al. (2025), Small Single-Stairway Apartment Buildings Have Strong Safety Record, Center for Building in North America

37 DLUHC (2024), Impact Assessment on the introduction of Second Staircases in residential buildings above 18m, following the Consultation on sprinklers in Care Homes, removal of national classes, and staircases in residential buildings

basis that this would align with the definition of 'higher-risk building' in the Building Safety Act 2022.[38]

Requiring second staircases also makes achieving dual aspect, discussed in the briefing on overheating, much more challenging. The building regulations set out that buildings above 18 metres are expected to be long 'slab' buildings with a staircase at each end. In such buildings, it is particularly difficult to achieve dual aspect units, as they have 'double-loaded' corridors, with multiple units branching off the corridor and sharing one external wall.

Notably, the building regulations' diagrams for single and dual staircase buildings in Approved Document B as shown in Figure 3 show how dual aspect flats are much easier to provide in single staircase buildings.

Figure 3: Approved Document B single and dual staircase floorplans

38 MHCLG (2024), Consultation response – Amendments to Approved Document B: Second Staircases

International best practice:

The UK was previously a relative outlier (along with South Korea and Switzerland) in having no height limit for single staircase buildings prior to these regulations. However, there is substantial variation between countries with height limits for single staircase buildings, ranging from two storeys (6 metres) in Canada to thirty storeys (90 metres) in Austria.

Belgium, Poland, Norway, Australia, and New Zealand all have height limits of 25 metres, with Spain, Portugal and Romania having height limits of 28 metres. Sweden's height limit is 16 storeys (48 metres), France's is 50 metres, and Finland's is 52 metres. Germany, Ireland, and Singapore all have a single stair height limit of 60 metres.[39]

This variation partially reflects differences in other fire regulations. Typically the higher limits are allowed only for buildings that have sprinklers, which are required for all buildings in England above 11 metres.

In a 2011 US international study comparing fire deaths across twenty-four developed countries, the four countries with the lowest death rates were Italy (80m height limit for single staircase buildings), Austria (90m), Singapore (60m), and Switzerland (no limit).[40]

Options for reform:

The costs of the dual staircase requirement are so large in part because 18 metres is not high. Six storeys is widely considered a 'mid-rise' building, of the sort the forthcoming Brownfield Passports will be trying to encourage in urban areas.

In addition, Phase 2 of the Grenfell Tower Inquiry stated that the statutory definition of higher-risk residential buildings as those 18 metres high was not satisfactory and 'essentially arbitrary', and recommended it be urgently reviewed. The Government has accepted this recommendation and plans to set out a review of this definition in Summer 2025.[41]

The review provides an opportunity for the Government to revisit the dual staircase requirement. If the Government accepts the case that single staircase buildings are unacceptable in the tallest buildings, there are still two clear options to consider:

- **Moderate:** Revert to the initially proposed 30 metre height limit for single staircase buildings, which is still lower than that of Sweden, Denmark, and Finland.
- **Bold:** Set a new 50 metre height limit for single staircase buildings, the same as France, and lower than Germany, Ireland, Austria, and Switzerland.

Getting mid-rise buildings built and ensuring they are high quality is crucial for the Government's Brownfield Passport agenda to succeed and remain durable. Single staircase reform can achieve higher housebuilding in urban areas without any impact on safety.

39 Speckert, C. (2024), The Second Egress: Building a Code Change
40 FEMA (2011), Fire Death Rate Trends: An International Perspective, Topical Fire Report Series, Vol. 12, Issue 8
41 MHCLG (2025), Grenfell Tower Inquiry Phase 2 Report: Government response, HMSO, CP 1248

05

The Building Safety Regulator (BSR)

- **Rationale:** Established to ensure that buildings above 18 metres do not repeat fire safety issues uncovered on existing buildings after the Grenfell Tower fire.
- **Definition:** The Building Safety Act 2022 created a new body within the Health and Safety Executive, known as the Building Safety Regulator (BSR). The BSR has absorbed building control functions for "higher-risk" buildings taller than 18 metres from local planning authorities and private firms, and sets out three distinct "gateways" that applications for higher-risk buildings must proceed through. Gateway 1 is granted by the local planning authority along with planning permission with the BSR as a statutory consultee; Gateway 2 is granted by the BSR to allow works to commence when final designs are presented; and Gateway 3 is granted by the BSR before occupation to ensure that the building complies with the final design approved at Gateway 2.
- **Problem:** The BSR is stopping buildings above 18 metres from being built rather than making them safe, and it is not clear the BSR (or similar bodies) can ever have the incentive to support housebuilding.

The Interim and Final Hackitt Reports in 2017 and 2018 set out the Building Safety Act's framework. They identified a range of issues across record-keeping, accountability, material testing, and other issues that were in serious need of improvement.

The BSR was supposed to address the incentives that private building inspectors faced to let unsafe work through. In practice, the BSR has created new problems:

- **From October 2023 to October 2024, only 14 per cent of 1,018 applications to Gateway 2 had been approved by the BSR.**[42] Some of these were invalidated, but many have been left in a holding pen. At the start of 2025, over 800 schemes for buildings over 18 metres were stuck waiting to pass through Gateway 2.[43] Although the BSR is supposed to sign off applications to Gateway 2 in 12 weeks, delays of up to two years are being expected.[44]

42 Fire Protection Association (2024), 'FOI reveals number of Gateway 2 applications approved by BSR', 17th October 2024
43 Morby, A. (2025), 'Over 800 high-rise resi jobs stalled by safety regulator', Construction Enquirer, 30th January 2025
44 Lowe, T. (2025), 'BPF urges Reeves to fund 'new approach' at Building Safety Regulator', Housing Today, 10th February 2025

- **The delays mean the costs of the BSR are considerably greater than expected.** The initial Impact Assessment did not include delays in its assessment of the total predicted costs of the BSR, and instead expected that Gateway 2 would typically add £16,000 to the cost of a new higher-risk building, with Gateway 3 adding further £24,000 in costs. The Impact Assessment's own estimate that delays would cost the average building £10,000 per week would instead mean a 9-month delay would cost each building £360,000 just for Gateway 2.
- **As the Commissioner of the London Fire Brigade has recently stated to Parliament, this failure to build is itself a major fire risk.**[45] The most dangerous housing in Britain is overcrowded, poorly converted, and has unsafe electrics and access. Blocking new, safe housing increases the number of people who have to live with these risks, even if notionally this in the name of fire safety.

The BSR has admitted there is a bottleneck, and claims that its rejection rate of almost 70 per cent of applications at Gateway 2 is primarily due to poor quality applications from developers.[46] Even so, Gateway 3 is starting to emerge as a new, second bottleneck – less than a quarter of applications that reached this stage in 2024 (seven out of 40 at Gateway 3) were subsequently consented by the BSR.[47] Together, these delays create the risk that developments over 18 metres that are given planning permission by local authorities today will not be built out and occupied by the end of the Parliament.

The BSR has recently set out clearer guidance, and more funding has been provided by the Government to improve capacity. It is plausible that these improvements could be enough to resolve the issues highlighted.

However, there is reason to believe the Gateway process could be fundamentally flawed. The BSR lacks a clear incentive to support housebuilding as its mandate is exclusively focused on the enforcement of regulations and building control. For instance, its strategic plan does not mention any need to support housebuilding, improvements to affordability, or wider economic benefits, such as the 'growth duty' on public bodies.[48]

In contrast, local authorities are subject to the costs of failing to build if they do not meet their housing target. In line with this, Gateway 1, which is consented by the local planning authority when it grants planning permission with the BSR as a statutory consultee, is not widely considered to be a bottleneck. It is not obvious that local authority building control needed to be centralised by the BSR to improve building safety for new high-rises.

Furthermore, Gateway 2 in its current form is particularly challenging for the 'design and build' single contractor model. Design and build accounts for between half and two thirds of all projects,[49] and allows the contractor to resolve problems that emerge during the construction process by changing the design. Design and build was advanced in the Latham and Egan Reports in 1994 and 1998 respectively as a model that could reduce construction costs by up

45 Housing, Communities and Local Government Committee, Evidence Session: Grenfell and Building Safety, Tuesday 18 March 2025 11:43:16
46 Morby, A. (2025), 'Regulator pledges to clear 122 project backlog by April, 'Construction Enquirer, 10th February 2025
47 Gardiner, J. (2025), 'Fewer than one in four high-rise projects at final 'gateway 3' stage have received a decision', Housing Today, 18th February 2025
48 HSE (2023), Building Safety Regulator strategic plan: 2023 – 26
49 Beeston, P. (2024) Investing In Your Supply Chain, Rider Levett Buckall

to 20-30 per cent.[50]

This model is fundamentally undermined by how the BSR is requiring sign-off at Gateway 2 for every mid-build design adjustment. This is despite the fact that the legislation underpinning the BSR's decision-making does allow conditional approvals [The Building (Higher-Risk Buildings Procedures) (England) Regulations 2023, Section 7, (2) and (3)], further suggesting there is an underlying problem with the incentives of the BSR.

International best practice:

The Hackitt Reports set out that there is a wide variety of different approaches to building control across the developed world. Many of the distinctions concern the role of private inspectors, and the differences between 'outcome' and 'prescriptive' approaches to fire safety regulation. Federal countries appear to often allow their subnational units to write their own building regulations.

A 'gateway' approach is argued to have a stronger link to enforcement in the interim Hackitt Report. **No examples are identified of the enforcement of building control by a national body specifically for high rise buildings.** Building control appears to be consistently a local responsibility, with varying amounts of privatisation.

Options for reform:

Alongside promises of additional capacity, change is already coming to the BSR through two commitments the Government has made in response to the Grenfell Tower Inquiry.

First, the review of the definition of higher-risk buildings from arbitrary height limit this summer will change the scope of the Gateway process.

Second, the Government has announced it intends to accept the recommendation to replace the BSR (and several other bodies) with a new single construction regulator, with a currently undefined scope.

The question for the Government is the degree of confidence that they have in the BSR to support safe housebuilding.

If they believe the process can ultimately work with additional resource then it should be retained within a new regulator. This should be done alongside an emphasis on the growth duty and supporting housebuilding for the new regulator, and changes to the definition of higher-risk buildings, which should be tightened to focus on a smaller number of buildings, particularly those with a disproportionate number of vulnerable residents. A shift towards conditional approvals, even just as an interim step, would also support housebuilding as well as the design and build model.

If the Government instead concludes that these issues are inherent to the BSR due to the restrictions it places upon Design and Build contracting and the poor incentives an arm's

50 Latham, M. (1994), Constructing the Team: Joint Review of Procurement and Contractual Arrangements in the United Kingdom Construction Industry, HMSO; Egan. J. et al. (1998), Rethinking Construction: The Report of the Construction Task Force, HMSO

length body has to support housebuilding, then it implies that BSR's control over Gateway 2 and 3 applications needs to be removed. This can and should be compatible with retaining the other improvements to building safety across materials, accountability etc.

This presents two options to the Government for BSR reform:

- **Moderate:** Increase the Building Safety Act's definition of higher-risk buildings from 18 metres to either 30 metres or 50 meters (aligning with the new standards for dual staircases), use conditional approvals, and apply the growth duty to either the BSR or its successor.
- **Bold:** Transfer responsibility for Gateway 2 and 3 from the BSR back to either local authorities, as was the case before 2023, or to the existing and forthcoming strategic authorities.

06

Biodiversity Net Gain (BNG)

- **Rationale:** Development should contribute to the active restoration of nature.
- **Definition:** Originally announced by Michael Gove in 2018, the Environment Act 2021 included a new statutory duty that mandates all development (with very few exceptions, most notably sites with less than 0.25 hectares of habitat and self-build) should contribute to a minimum 10 per cent increase in habitats. This came into force in early 2024.
- **Problem:** BNG is more expensive than was predicted. In practice, it penalises environmentally friendly brownfield development and incentivises suburban sprawl.

England is experiencing nature decline, and the Government is committed to halting and reversing this recovery. Biodiversity Net Gain (BNG) was introduced as a planning requirement on development to assist efforts towards this goal.

Developers have three options to meet their BNG requirements. First, through 'on-site' mitigation, where extra habitats are provided as part of the development. Second, if this is not possible, through developers' purchase of a 'credits' that support habitats 'off-site' in separate locations through a market. Third, if this market does not supply habitats of the right type, through more expensive 'statutory' credits purchased from Natural England.

The goal was that BNG would raise lots of revenues to support off-site habitats, while also being cheap enough to not become a burden on "timely and cost-effective delivery of much-needed development".[51]

However, the off-site aspect of BNG is already facing several problems:

- **Small sites and brownfield housebuilding face a disproportionate burden to fund off-site habitats.** Although conversations with developers indicate BNG is becoming a bottleneck for some new suburban developments, particularly on sites with hedgerows and watercourses, on-site provision is broadly more straightforward on big sites of agricultural land that have little biodiversity. Six of the nine largest

51 DEFRA (2018), Net gain Consultation proposals

housebuilders, building 29 per cent of England's new homes, were already providing on-site BNG voluntarily prior to the introduction of the statutory requirements. [52] This means that small sites, which have limited room to provide lots of new habitats on-site, have to do the heavy lifting on supporting the off-site part of the system.

- **Developers of small sites are trying to avoid BNG.** The share of planning applications that claim to have less than 0.25 hectares of habitats and so be exempt from BNG has climbed from 30 per cent to over 75 per cent in the year since BNG's introduction.[53] In response, nature organisations are arguing the exemptions should be removed and that 10 per cent net gain is inadequate, so that BNG can extract more revenues out of development for off-site habitats.[54]
- **Revenues for off-site habitats are small.** DEFRA in its impact assessment for BNG estimated that the total cost to developers to comply would be £199 million a year (2017 prices), with this revenue used to support new habitats.[55] Nature organisations have identified that only a fifth DEFRA's expected off-site habitats were funded last year. Although the market system is performing below expectations, it is performing better than the system for 'statutory' credits, of which only £247,416 worth were sold by Natural England.[56]

The logical conclusion is that the reason the off-site market is struggling is **the BNG credits are too expensive, and this particularly affects urban brownfield sites.**

DEFRA's impact assessment expected that BNG on brownfield development (~0.1 per cent of total build cost) would be cheaper than greenfield (1 per cent of total build cost). It estimated a cost of £11,000 per off-site 'unit', or £49,060 per hectare.[57]

This appears in practice to be an underestimate. Development on one hectare of cereal cropland in 'moderate' condition generates a requirement to compensate for 2.2 'units'. In theory, the statutory price of £42,000 per unit gives an indicative bill for developers of £92,400 per hectare for off-site mitigation in the marketplace – already higher than initially expected.

In contrast, development on a hectare of brownfield 'bare ground' or 'vacant or derelict' land in a 'moderate' condition, the BNG system requires 4.4 units of mitigation. With the same statutory price of £42,000, the total indicative bill for off-site mitigation comes to £184,000. Even though the BNG bill is higher than expected for cropland, it is even higher for brownfield land.[58]

The costs of BNG are even greater on the brownfield land most in need of regeneration. Open Mosaic Habitats (OMH) is a landscape associated with industrial wasteland, heaps of bare gravel and stagnant pools. OMH is given a high biodiversity value by the BNG system, and is

52 DEFRA (2019), Biodiversity net gain and local nature recovery strategies: Impact Assessment
53 TerraQuest (2025), Biodiversity Net Gain: The Story So Far
54 Wildlife and Countryside Link (2025), Biodiversity Net Gain and how to deliver nature positive growth
55 DEFRA (2019), Biodiversity net gain and local nature recovery strategies: Impact Assessment
56 DEFRA (2025), Biodiversity net gain statutory credits: annual report 2024 to 2025
57 DEFRA (2019), Biodiversity net gain and local nature recovery strategies: Impact Assessment
58 Buildings and tarmac do not require mitigation, which all else equal will reduce the cost of BNG in urban areas relative to greenfield sites – however given the statutory prices it seems unlikely that this could reduce the costs to the impact assessment's relative estimates.

the habitat of the infamous 'distinguished jumping spider' identified by the Prime Minister that blocked a theme park and homes near Ebbsfleet.[59]

The statutory BNG model shows that for a one-hectare OMH site, of moderate quality and medium strategic significance, requires compensation of 13.2 habitat units. As habitats cannot be provided on this constrained brownfield site, the developer must instead purchase off-site credits. If such a habitat could be easily induced the market for creating more OMH in the BNG system could perhaps form, but given OMH requires prior industrial use, this has not yet occurred. The result is that developers are *forced* to buy statutory credits from Natural England at double price, which comes to £96,000 per 'unit'.

For a one hectare site of OMH, BNG therefore presents a bill of £1.27 million.

This is a large cost in absolute terms. Examples have been reported on BNG bills for OMH sites that are three times the total construction cost of development.[60]

As BNG is a flat requirement on land, denser and taller developments can spread the cost of BNG across more homes, but even these costs can still be substantial. For a mid-rise development of 75 homes per hectare, where total development costs might be estimated to be around £13 million, BNG for one hectare of OMH would increase total construction costs by 10 per cent. For a suburban development of 35 homes per hectare, where total construction costs might be estimated to be around £7 million per hectare, BNG for OMH increases total costs by 19 per cent.

However, the other anti-supply measures' restrictions on new buildings above 18 metres (dual staircase requirement, the Building Safety Regulator) limit ability of density to spread the cost of BNG between more flats. A shift towards smaller new buildings in urban areas would make BNG costlier to implement than when it was originally proposed, even if BNG was otherwise implemented exactly as proposed.

Similarly, as BNG costs are nationally flat, it particularly penalises development in cities in the Midlands and North with lower land values and large amounts of industrial wasteland in the greatest need of urban regeneration.

International best practice:

Natural England has stated that BNG in its current form is "world-leading".[61] This appears to be true, with comparable schemes more limited in scope – the National Audit Office has identified England as the first country in the world to mandate BNG as a national legal requirement.

For example, the US off-setting scheme only applies to wetlands; France and Germany require offsetting to avoid net loss, but do not require a 10 per cent net gain.[62] Policy in other parts

59 Whipple, T. (2025), The jumping spiders blocking building on Britain's industrial wastelands, The Times, 18th April 2025; Natural England (2021), Swanscombe Peninsula SSSI Kent: Notification Document

60 Crowley D. and Hepburn, M. (2024), 'OMG! It's OMH! The conflict between brownfield regeneration and preservation of Open Mosaic Habitat', Lichfields

61 Natural England (2024) Strategy breaks ground on biodiversity net gain and nature growth

62 DEFRA (2019), Biodiversity net gain and local nature recovery strategies: Impact Assessment

of the world seems to mostly be in the US model of applying to very specific protected sites, such as rainforests and steppe lands.[63]

This implies England's approach of requiring net gain from almost all development is stretching by global standards.

Options for reform:

Despite the environmental and climate benefits of building in cities, the BNG system in its current form discourages brownfield development.

The tension at the heart of BNG is that it is expensive but raises little money. For BNG to make a bigger contribution to the Government's nature goals with more off-site habitats brought to the market, it must impose heavier burdens on brownfield development and the smallest sites with little ability to spread the cost across many new dwellings.

This emerges as BNG violates the 'polluter pays' principle. BNG applies what is essentially a tax on households at the sharp end of the housing crisis and the developers trying to provide for them, to provide a revenue base that can mitigate ecological loss that has already occurred and was caused by others. The revenue base is too narrow and falls too sharply on activity that needs to expand to support national economic growth.

For this reason, even if BNG is strengthened, it may continue to disappoint ecologists with continued low revenues for off-site mitigation, while still presenting barriers to environmentally friendly development in cities.

One option would be to scrap BNG entirely, and use other methods to achieve the Government's environmental targets. This would be appropriate if BNG becomes a major blocker for new suburban greenfield development. If BNG is to be retained however, there are two options for the Government:

- **Moderate:** Reduce the BNG system's burdens on brownfield sites. Lower statutory prices, fewer habitat units (e.g. for OMH), and more exemptions could retain at least some role for urban development and constrained sites in the BNG system.
- **Bold:** Remove BNG from brownfield sites (as the Royal Town Planning Institute previously called for)[64] and/or retain it only for greenfield sites allocated in local plans and for New Towns. This would retain BNG for developments where it is easiest to deliver on-site, deliver minimal off-site provision, and relieve BNG's burdens where they are greatest.

63 IUCN (2019), World View - A Snapshot of National Biodiversity Offset Policies
64 RTPI (2022), RTPI response to DEFRA Biodiversity Net Gain Regulations and Implementation consultation

07

What reforming anti-supply measures would achieve: The Cockfosters case study

The five anti-supply measures each make urban housebuilding more difficult on their own terms, but that is not their only effect. The contradictions between the regulations create a further combined impact that limits what is feasible beyond what any individual regulation might suggest.

This can be shown with a case study – the Cockfosters development.

The London Borough of Enfield granted planning permission to a development of 351 new Build to Rent homes adjacent to Cockfosters tube station in February 2022. The development was immediately blocked by the then-Government. The new Government elected in July 2024 unblocked the project in September 2024.

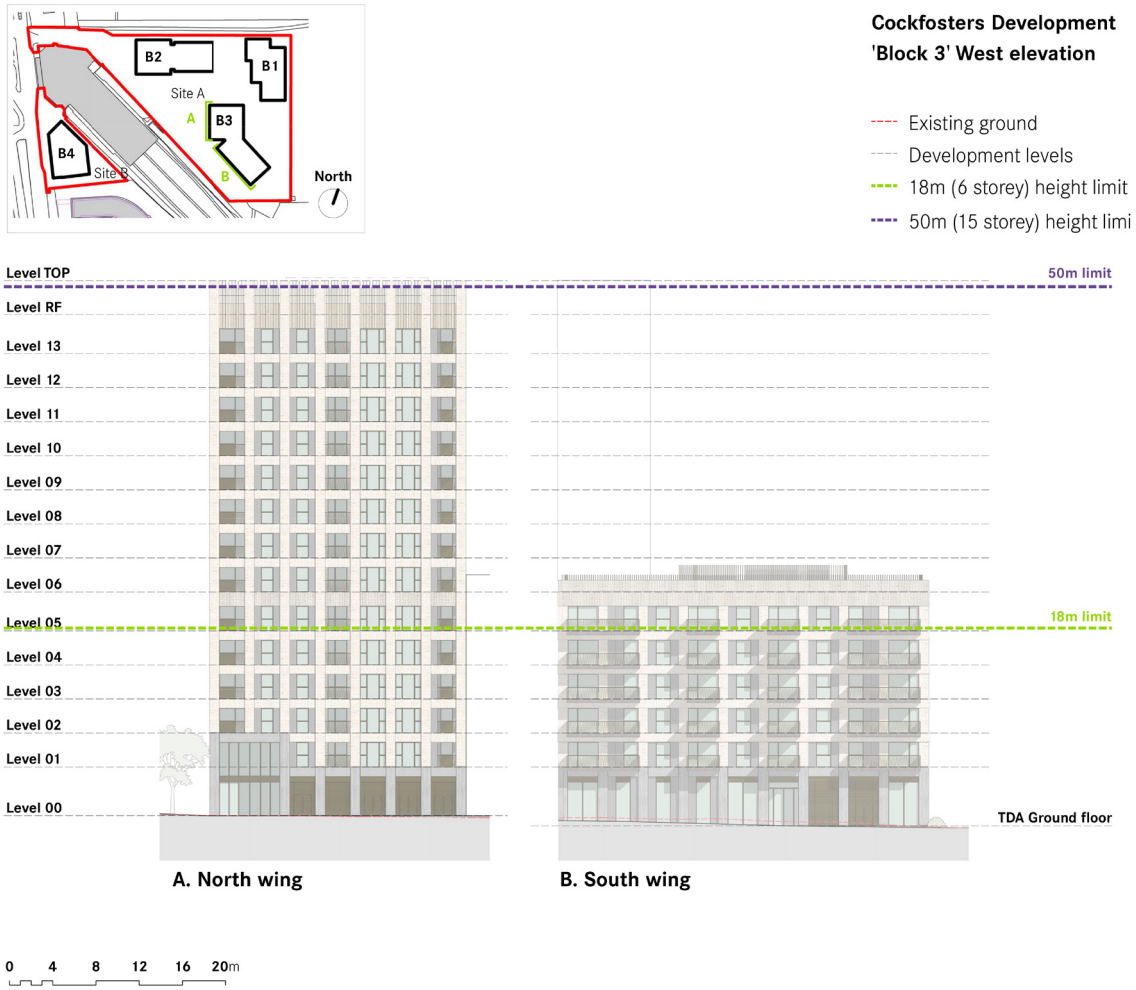
The three year delay from the granting of planning permission in February 2022 presents a particular opportunity to assess how anti-supply measures which came into force over that period have affected the feasibility of projects.

The 2022 Cockfosters development proposed four new buildings. One of these buildings – 'Block 3' – is the focus of this case study and serves as the basis for a range of different possible designs.

As shown in Figure 4, the 'original' design of Block 3 is an upright 'L-shape' containing 107 proposed new homes and new TfL offices on the ground floor. It has two distinct halves – a northern upper wing with a lift and staircase reaching up to 15 storeys (50.5 metres) of which 13 storeys have flats. A southern lower wing reaching up to 6 storeys (21.7 metres)[65] contains 5 storeys of flats and a separate second staircase. The L-shape is a product of design requirements set out in the planning application, with a desire to avoid "massing" of large slab-like buildings around the station.

65 This is above the rule of thumb that six storeys is approximately 18 metres as the ground floor is double height. If the ground floor's height was a standard height, the height of the southern wing would be 18.5 metres.

Figure 4: 'Block 3' of the Cockfosters development, external



Source: London Borough of Enfield Planning and Building Control, Application 21/02517/FUL, Document CFCP-HBA-B3-XX-DR-A-08-0273 PO2 - Block 3 - West Elevation

The two halves are joined by a corridor on every floor up to the south wing's roof garden on the sixth floor, as shown in Figure 5. The floorplan notes how many bedrooms and square metres each flat has by individual floor, with the northern wing continuing up from the seventh storey to the fourteenth storey. Only one of the one-bed flats on every floor up to the sixth storey is dual aspect, increasing to two from the seventh storey onwards, while the multibed flats are all dual aspect.

Figure 5: 'Block' 3 of the Cockfosters Development, internal

Source: London Borough of Enfield Planning and Building Control, Application 21/02517/FUL, CFCP-HBA-00-03-DR-A-08-0124 PO2 - Third Floor GA Plan

Since the application was made in 2021, the roll-out of new regulations mean that this original design is no longer allowed. Instead of building out the scheme, the developer is currently redesigning the project to comply with these new measures.[66]

The next section shows how each of the five anti-supply measures interacts with Block 3, both as an individual restriction and in combination with the other measures, before providing a model that estimates the combined impact of the anti-supply measures and what reform would legalise.

1. Minimum space standards:

Space standards are the only anti-supply measure that predate the original planning application for Cockfosters. As a result, none of the one-bed flats in Cockfosters are smaller than 50m^2 – the space standard for one-bed flats for two people.

If the space standard for one-bed flats for single residents was reduced to 18 m^2, the total number of flats provided would increase, and the one-bed flats that were built would be

66 Lowe, T. (2024), 'Labour overturns previous government's rejection of controversial 350-home Cockfosters scheme', Housing Today, 3rd September 2024

cheaper. However, the original design is still blocked by the dual staircase requirement and the BSR.

2. Dual staircases:

Even though the original Block 3 has two staircases, it does not comply with the new dual staircase requirement. This is because the northern wing currently rises to 15 storeys – 50.5 metres – on a single staircase only.

There are two ways Block 3 could currently comply with the dual staircase requirement.

First, it could 'chop' the flats that only have a single staircase, so that the building remains dual staircase for the one storey that is above 18 metres.

Second, it could comply with the dual staircase requirement by joining the upper wing's highest flats to the second staircase by building upwards on its lower wing to the fifteenth storey. This would increase the number of homes built, but by turning the 'L-shape' into a 'slab' would contradict the design requirements in the planning application to avoid massing, reduce the share of dwellings that are dual aspect, and still be subject to the BSR's multi-year delays.

3. Building Safety Regulator:

Block 3's original design and most of the alternatives qualify as higher-risk buildings as they are over 18 metres. Any new building of this height must pass through the BSR's Gateways 2 and 3, subject to long delays. A 'chopped' design to reduce the height below 18 metres is the only way developers can avoid the costs of the Gateway delays.

Alternatively, if the Gateway process was limited to buildings larger than 50 metres, then Block 3 would only have to chop half a metre (most likely from the entrance lobby) to be subject to the normal local authority building control process. If the BSR proves intractable to further reform, returning all high rise building control to local planning authorities may be necessary to avoid unnecessary delays for taller buildings.

4. Dual aspect and overheating:

Block 3 was proposed before the London Housing Design Standards attached to the London Plan in 2023 set out an expectation that dual aspect must be "maximised" across dwellings unless exceptional circumstances apply. A fully maximal result would substantially change the design of the building, with substantial 'notching' of the external walls.

Only 57 per cent of the original design of Block 3's dwellings were dual aspect. The dual staircase factor of the L-shape design is a major reason. 49 per cent of flats on the dual staircase storeys of Block 3 are dual aspect, compared to 67 per cent of flats on the single staircase storeys.

The original design for Block 3 was also proposed before the new national building regulations focussed on reducing overheating came into force in June 2022. The original Cockfosters

overheating assessment also only recommended that four flats have air conditioning units.[67]

A Block 3 with maximised dual aspect could end up struggling to comply with these new building regulations if they significantly increase internal day light (solar gain). If this becomes a problem, unless more air conditioning units are provided, the only way to comply with the building regulations (which have a different definition of dual aspect to the London Plan) would be with smaller windows to reduce solar gain.

5. Biodiversity Net Gain:

BNG is not a barrier on the Cockfosters site. As an in-use car park, the Cockfosters Site is predominantly tarmac, and has no requirement for off-setting under BNG. This makes it straightforward to achieve 10 per cent net gain in habitats site with some landscaping and new trees.

Other brownfield sites will face the BNG problem. To illustrate, if the Cockfosters site had hypothetically been left derelict and the tarmac had degraded to the point of becoming Open Mosaic Habitat (OMH), then the obligations would have increased to a BNG off-site mitigation bill of £396,500.[68]

The impact of this hypothetical OMH BNG bill on the development would have varied according to the density of Block 3. In the original proposal for 107 homes, OMH BNG would come to a of £3,700 per flat, while for the 'chopped' scheme at five storeys, it would have increased to £8,400 per flat.

This shows a fundamental tension between BNG and the new 18 metre restrictions on heights (dual staircase requirements and BSR), as taller buildings would allow the cost of BNG to be spread over more flats.

What reform of the anti-supply measures would achieve

The impact of the anti-supply measures on housebuilding can be estimated by taking the floorplans for each floor of Block 3 and reallocating space between varying mixes of different-sized flats and the heights of each wing.

Table 1 shows how many units could be delivered across a number of alternative designs. Along the horizontal axis, different heights and designs of the Block are presented. These are shaped by dual staircase requirements and Building Safety Regulator (BSR) which both activate at 18 metres, and in the table are replaced with a new threshold at 50 metres.[69] As the definition of "maximised" is subjective, it has not been possible to estimate the costs of redesign to comply with dual aspect maximization for Block 3.

Along the vertical axis, different mixes of the floorspace allocated to one-bed flats are presented, with multibed flats left unchanged. The first row includes the original proposal with

67 Sudarmaji, T. (2021), Cockfosters Underground Station: Overheating Assessment, SNC Lavalin and Atkins, Document reference: 5192139-BP-TN-0005

68 Block 3's quarter share of the Cockfoster's site's 1.25 hectares of tarmac as OMH would have required 4.13 units of BNG units in mitigation. Purchased as statutory credits at double the statutory price of £48,000, this would have resulted in a BNG bill of £396,500.

69 Implicitly, 0.5 metres on the 50.5 metre north wing is chopped in these designs, likely from the double-height entrance lobby.

all one-bed flats 50m^2 or larger. The subsequent rows show options for the total number of homes if the space standard was reduced to 18m^2. The second row shows total dwellings with mix of 50m^2, 36m^2, 25m^2 , and 18m^2 one-bed flats alongside the existing multibed flats, and the third row shows total dwellings if all the one-bed flats were set at 18m^2.

Table 1 shows that at present only a 'chopped' design that provides 47 new flats could feasibly be built, less than half the 107 new flats in the original design. By reducing the height of the building below 18 metres, Block 3 can avoid the dual staircase requirement and (by losing one storey that is dual staircase but is above 18 metres) avoid BSR's multiyear delays for Gateways 2 and 3, while still conforming with the planning application's goal of avoiding massing. This loss of housing could be partially mitigated by a reduction in space standards to include more one bed flats below 50m^2.

Reports and conversations with industry indicate that this 'chopping' is starting to occur on a wider scale in planning applications across London, with developers keener to just build what they can rather than running the gauntlet of building taller. [70] **If Block 3 of Cockfosters is taken to be a typical development, then this halving of feasibility is the state of play for urban housebuilding in England in 2025.**

Table 1: Estimated maximum number of new homes in Cockfosters' Block 3 under varying reforms to anti-supply measures

	'Chopped' (5 storeys)	'Original' (14 storeys) [blocked by dual staircase and BSR]	'Slab' (14 storeys) [blocked by BSR]	'Two towers' (14 storeys) [blocked by dual staircase and BSR]
50m^2 one bed flats [original design]	47	107	155	155
18-50m^2 one bed flats [blocked by 37m^2 space standard]	60	147	195	208
18m^2 one bed flats [blocked by 37m^2 space standard]	110	214	286	300

Source: Centre for Cities calculations

Note: Along the horizontal axes different approaches to heights and building structures are presented, including the original 'L-shape' design that is no longer allowed; the 'chopped' design below 18 metres that avoids the dual staircase requirement and the BSR's multi-year delays; the 'slab' design that would join the highest flats to a second staircase by building upwards on the lower wing; and a 'two tower' design with two single staircase buildings, which by reducing shared corridor space from 20 per cent to 17 per cent of the total interior area, in line with the single staircase blocks on the Cockfosters site, is able to allocate more space for one-bed flats. Along the vertical column, different space standards and mixes of one-bed flats are presented, with multibed flats in the original proposal left unchanged. Underlined numbers are presented in Figure 6 below.

70 Krikler, F. (2025), 'The 18-metre effect: housing delivery at risk from regulatory gridlock', Building Design, 3rd April 2025

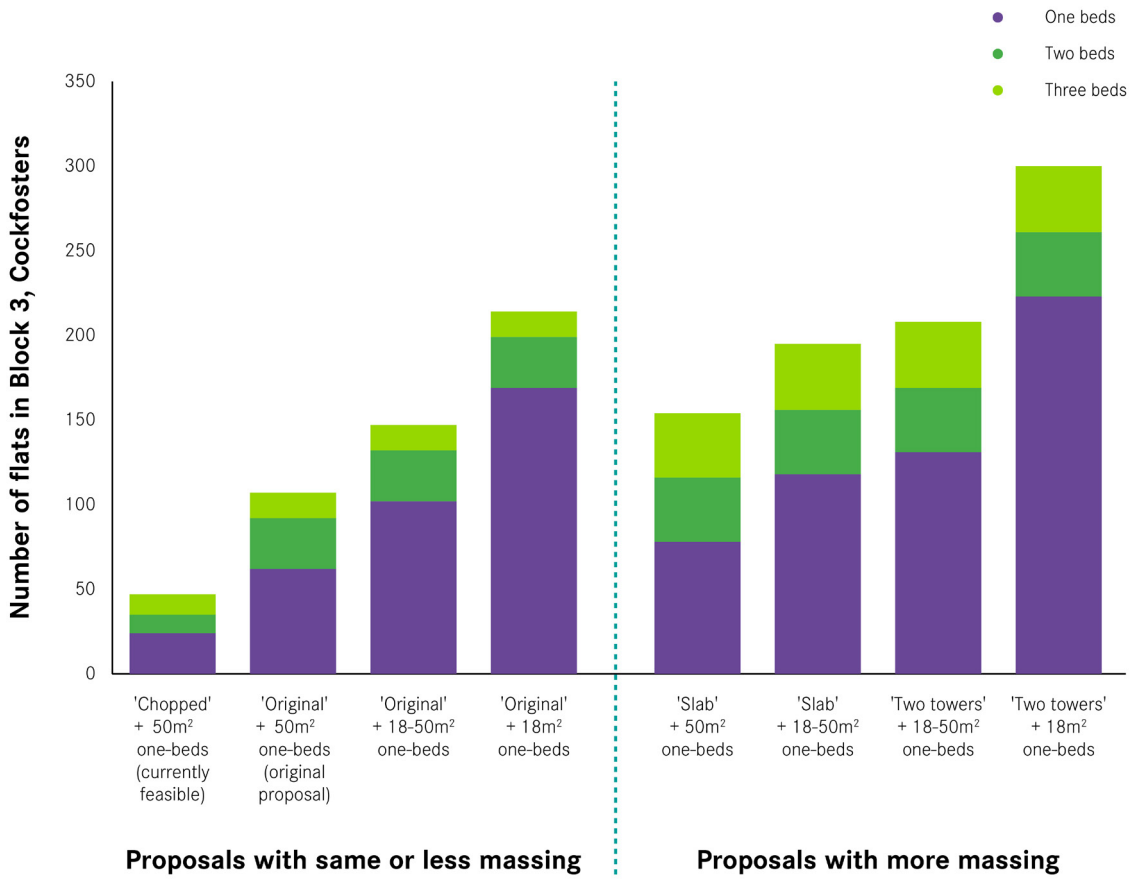
Table 1 also shows an alternative way to comply with the dual staircase requirement would be to extend the south wing upwards. By violating the original planning application's goal of avoiding massing, a new 'slab' design could join the fourteenth storey to a second staircase and add more housing than the original L-shape design.

Even this 'slab' design would face problems with the other anti-supply measures. It would still need to spend years passing through the BSR's Gateway 2 and 3, which could render the Cockfosters project unviable or at least prevent it from contributing to the 1.5 million target in this Parliament. The requirement to maximise dual aspect would also pose challenges for the slab design.

The implication is a combined effort across all the anti-supply measures is necessary to achieve a major increase in urban housebuilding.

The effect of a combined reform effort can be seen Table 1 and Figure 6. Changes to the dual staircase requirement and the BSR would re-legalise the original design, and reductions to the space standards would allow it to contain more flats than before. **This combined approach to the anti-supply measures would more than quadruple the amount of housing Block 3 could provide.**

Figure 6: Estimated number of flats in variant designs of Block 3 of the Cockfosters project, by bedroom



Source: Centre for Cities calculations

Taller buildings than the original design would also be legalised across England's cities through combined reform of the anti-supply measures. Removing the dual staircase requirement and the BSR below 50 metres would permit an alternative 'two towers' design with two single staircase buildings. This would also violate the planning application's goal of avoiding massing, but would find it easier to achieve dual aspect and provide even more homes than the slab design, as space could be reallocated from the long internal corridors of the slab to the interior flats.

As Figure 6 shows, changing the design to provide two towers of 14 storeys while reducing space standards for the one-bed flats could provide 300 homes **– more than six times what is currently lawful.** That does not mean the design requirements of the Cockfosters site must change to accommodate such scale. But in sites that are appropriate for towers of this height, the anti-supply measures identified in this report currently make such a significant contribution to urban housing supply impossible.

Conclusion

Commercial and design factors will shape how many flats are in Block 3, even if all the anti-supply measures are removed. Radical changes to the building footprint could also result in many more or fewer buildings than presented in Table 1.

Yet Block 3 is not an outlier. The 'chopped' 47 flat design risks not being a one-off, but the typical response by developers to the barriers they now face. It might not even be the new norm, but the new maximum for urban housebuilding.

A six-fold increase in possible development opportunities in cities may sound stark. But it is the kind of scale the Government needs to be considering if it is to reach its national housing targets in this Parliament. For 1.5 million new homes to be feasible, urban housebuilding at scale needs to be feasible.

This report set out why each of the anti-supply measures is costly on their own individual merits, and presented options for reform that will not harm wellbeing, affordability, or safety.

The greatest benefits will come from a bold, combined approach that relegalises many different types of urban housebuilding. Such an approach would complement the Government's Brownfield Passports agenda, the forthcoming London Plan, and ensure that the most is made of the Government's planning reforms to support economic growth across the nation.

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