
ADAM SMITH
INSTITUTE
Homes for All
A debt-free solution to the Housing Crisis
Miles Saltiel and Maxwell Marlow

About the Authors

Miles Saltiel is a Senior Fellow at the Adam Smith Institute.

He read PPE at Oxford and wrote his MA dissertation on Japanese business and government at Sussex. In 1979, he joined GEC-Marconi, working in corporate finance and recoveries, to become no. 2 in Marconi Projects. In 1986 he went into investment banking, joining the WestLB Group in 1996 as Head of Equity Research, Emerging Markets. In 1998, he assumed responsibility for London-based Tech Research, and in 2000 was voted one of the UK's top 50 in the New Economy, in 2002 becoming the senior tech banker at the WestLB group.

His publications for the Adam Smith Institute include '*Seeing the wood for the Trees*', which evaluated the Forestry Commission's place in modern Britain; *The revenue and growth effects of Britain's high taxes*, (with Peter Young), which presented cross-country and cross-period analyses of tax reform; *Bank regulation: can we trust the Vickers report?* (with Tim Ambler), which analysed the report of the Independent Banking Commission and made counter-proposals; *'On borrowed time'*, which argued for the reform of "age-related" expenditures to relieve otherwise insupportable fiscal pressure; and *'No reason to flinch'*, which argued against insulating the NHS from reform by comparing it to equivalent regimes internationally. He also led ASI teams, whose essays were shortlisted in Grexit and Brexit competitions.

Maxwell Marlow is the Director of Research at the Adam Smith Institute.

Before working at the Adam Smith Institute, he worked as a Public Affairs and Communications Executive at strategic consultancy Hanbury Strategy. Clients he worked with included leading financial institutes, crypto firms, fundraising platforms, and transport providers. He is also a Non-Executive Director at the Masonic Charitable Foundation, one of the UK's largest charities, where he advises on policy horizons and strategic vision.

Maxwell graduated with a first class Joint Hons BSc in Politics and History from the London School of Economics & Political Science, where he was also twice consecutive President of the Hayek Society. Whilst at LSE, he was a Don Lavoie Fellow in Political Economy at the Mercatus Center, George Mason University. He is a Fellow at the Consumer Choice Center. He is a non-executive director at the Masonic Charitable Foundation.

Cover Image - James Lawson

Executive Summary

- England's metropolitan green belts, which were introduced after the Second World War to prevent urban sprawl, are a central contributing factor to our housing crisis.

- Rather than improving our urban developments in comparison to other prosperous nations, they have made them worse. The mostly disappointing postwar new towns have contributed to the national antagonism to development.

- Local objections to development have blocked the new homes we desperately need.

- In order to prevent a whole generation of youngsters never being able to realise their dream of owning their own home, we must find ways to unblock local obstructions to housebuilding. Our proposals would directly link local development to increased household wealth.

This paper proposes a new scheme entitled "Homes For All" under which:

- The Government would use Compulsory Purchasing Orders (CPOs) to purchase metropolitan green belt land in an equitable way.

- Shares are then issued to land owners, local residents, central and local government.

- The Government would set up and use a development corporation to develop the land. We estimate that development would increase the value of the shares by x14.9.

After 15 years, we estimate that we could build 3.8 million houses to a high standard, and raise £985bn for the Exchequer.

Polling undertaken by JL Partners for the Adam Smith Institute to measure the popularity of the Homes For All policy found that:

- 43% of those polled supported the scheme if a proportion of the profits were given to the local community- regardless of whether it was on green belt land. Less than ⅓ opposed the scheme.

- Increasing the availability of affordable housing, investment in local government budgets and investment in infrastructure are the three most convincing arguments for the scheme amongst those polled.

- The scheme is strongly supported (68%) or slightly supported (55%) by those who had originally answered that they would oppose building in the local area- as long as a proportion of the profits from development are given to the local community and residents.

- Young people and renters are the most supportive of this scheme.

The paper also contains an appendix (A) addressing concerns about using the heavy-handed Compulsory Purchase Mechanism, and considers the use of an auction method developed from well-established 3G telephony auctions. Qualtitative evidence can be accessed in Appendix B.

Rationale

Green belts were introduced after WW2, with a view to preventing suburban sprawl.[1] Three generations on, we see the consequence: a pattern of urban development no better than any other prosperous nation. Indeed, in some respects it is worse, by way of postwar new towns which have been mostly disappointing, contributing to a prolonged dearth of housing and the national antagonism to development.

ASl's mission is to propose free market solutions to political problems. In this instance, we seek to unblock local objections to reform of the UK's land-use regime, specifically the metropolitan green belt. We see this as essential to break the deadlock which has bedevilled British housing for decades, leading to insufficient new homes and a gener ation of youngsters unable to realise the dream of their own property. Almost all such homes as have been completed are so cramped and ugly as to amplify the wide spread popular objection to any housing development. This leaves Britain with a modern housing stock which is unloved, combined with a pre-modern stock with inherent defects, in particular energy inefficiencies which add to the national carbon footprint, with its rectification a ticking time-bomb for its owners.

No such innovations were required for Britain's most successful large-scale commercial development, Canary Wharf, as the local authority was sidelined and the area was geographically isolated and largely depopulated. By way of international context, the largest urbanisation in history, that of China in recent decades, has been led by the provincial or city authorities. They either owned or appropriated the development land and participated in the increase in its value, with local individuals having little po litical clout.

The ASI has devised the concept of using financial products (securities) and land as Collatoralised Assets to underwrite the securities, in order to square the circle of local consent. They also make it possible to give the original landowner a share of the devel opment gain. This is desirable as abating the confiscatory aspect of the compulsory purchase previously present in large-scale developments in this country, for example the Victorian railways, post-war new towns, motorways from the sixties to the nineties and the continuing Canary Wharf development touched on above.

As we have developed this proposal, we have come to appreciate that the scheme has further economic, commercial and political benefits. Even so, no innovation of this kind will suffice to reverse the public's heartfelt opposition to new building. Such a change in national sentiment towards housebuilding can only occur over time, with opinion-formers, in particular from the architectural community, contributing to a climate which challenges the current planning regime. Higher standards of design and spaciousness than of late are also needed to abate popular antagonism. In order to achieve this, the ASI contemplates the prolonged campaign of which this proposal is part.

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1 This remains at the heart of policy, with the Parliamentary library beginning its recent note on the subject by stating that, "[t]he fundamental aim of Green Belt policy is to prevent urban sprawl…" Research Briefing Number 00934, House of Commons Library, Felicia Rankl, Cassie Barton, 20 October 2022.

Precedents

Using securities, in this way is a departure from our current structures, whilst building upon well-established precedents, including:

- the practice of the City of London Corporation for nearly a millennium, which acts as planning authority for land which it owns and negotiating with neighbouring landowners;

- the Danish mortgage market going back to 1795, with tradeable bonds matched to specific mortgages, subject to redemptions akin to those in this proposal;

- the "Land Value Capture" arrangements developed over the last twenty years throughout the world to support infrastructure spend, including London's Elizabeth Line; and

- a similar scheme of securities proposed to finance the reconstruction of Beirut after the civil war of the 1970s. This was put forward for different reasons: to address the fiscal incapacity of the Lebanese state. In the event the scheme was overtaken by the further political turmoil which culminated in the Syrian invasion.

We see this departure as called for by the UK's precarious housing circumstances: the country's political obstacles to development are not wholly unique, but they are both singularly acute and chronic.

Underlying Economics[2]

Our proposal is supported by the preliminary modelling which is reflected hereunder. Table 1 sets out the value of agricultural and residential land, in or around the metropolitan green belt. The figure for agricultural land is taken from the average of "Local Authority Partnerships" adjacent to London. The figure for residential land is taken from Havering, the London borough with the least valuable such land.

Table 1 shows the scope to share value: residential land stands in at 298x adjacent agricultural land. These figures would be reduced to the extent that development land is used for infrastructure and other non-income producing purposes.

Table 1. Value of land, £/ha

Agricultural	25.5
Residential	7,610

Table 2 sets out the default assumptions for the density of construction.

Fiscal Treatment

It is of the essence of this proposal that gains be exempt from tax, so as to abate the confiscatory aspect of compulsory purchase, fully incentivise local interests, avoid double taxation on developers (already taxes on profits on revenues), and reduce barriers for secondary market investment. Even so paragraph (9) below notes that Treasury revenues are nearly forty times those to be expected

Table 2. Density assumptions

Household dispersal - units/ha	10
Proportion of land retained for non-residential use	25%

The number of houses per hectare is set at one half current guidelines, with a view to creating spacious accommodation and plots, allowing for the highest standards of private and public amenity and infrastructure. As large tracts of land are being developed, there would have to be a provision for infrastructure, including areas devoted to public amenties. We deal with this by assuming 25% of the land will be dedicated to such purposes. The provisos in paragraph (9) below note that such costs need not be detremental to the public purse.

Table 3 sets out the default assumptions for the duration and costs of the building timetable.

Table 3. Construction Assumptions

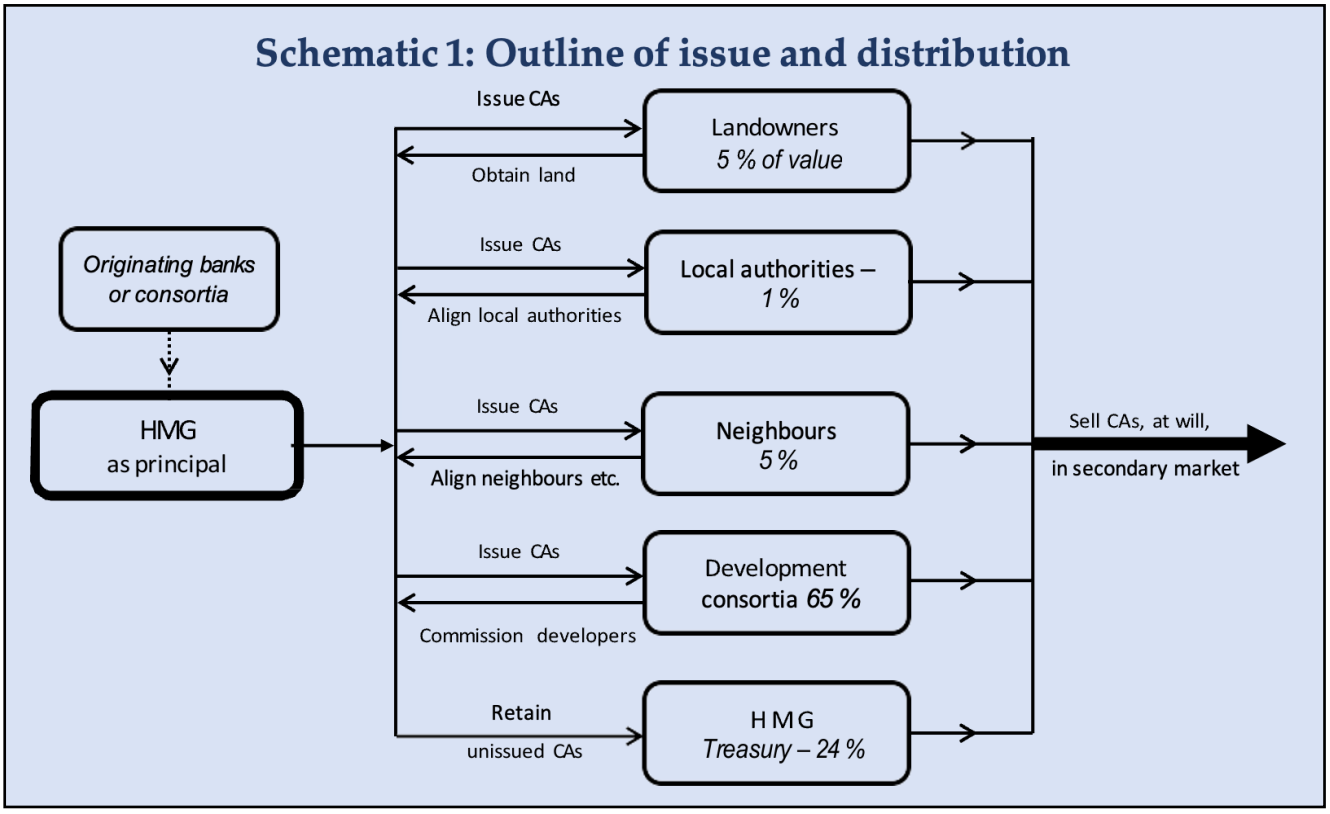
Master Programme	15 years
Housebuilding period	3 years
Remediation / infrastructure costs	£1.25m/ha
Build costs	£2,360/m^2
Built area	160m^2

2 See quantitative material, tables 10 and 11 for statistics and sources on the area and value of the metropolitan green belt and adjacent agricultural land.

The master development programme is set as fifteen years to allow for a pilot timetable of three years, the mobilisation of developers and a subsequent full-scale roll-out. The build period is set at three years to allow for a year of site remediation and preparation, a year of infrastructure and a year of housebuilding. Remediation and infrastructure costs reflect guidelines and constricutions costs come from industry sources.[3] [4] The built area of houses is over twice current new-build standards.

Issue and distribution of CAs[5]

Schematic 1 shows that His Majesty's Government is to issue Capitalised Assets (CAs) to original landowners, local interests, and developers, as discussed below:



Land purchases - 5% of issue[6] - HMG obtain land by compulsory purchase, in consideration of 5% of the CAs in issue. Although this is a small proportion of the total, it represents generous scope for appreciation for the original land owners. This recognises that many of these holdings have been accumulated speculatively. Landowners would obtain paper redeemable on completion for 14.9x the price of adjacent agricultural land, irrespective of Crichel Down limitations.[7]

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3 Taken from *Guidance on dereliction, demolition and remediation costs*, Homes and Communities Agency, March 2015.

4 Taken from *Garden City & Large Sites, Fincancial Model User Guide*, HYAS, February 2020.

5 Taken from quantitative material: Table 4. Allocation of unlocked value.

6 For details see quantitative material: Position of original landowner, tables 13 and 14.

7 Refer to *Guidance on Compulsory purchase process and the Crichel Down Rules*, Department for Levelling Up, Housing and Communities, 2019.

Local interests - 6% of issue[8] - CAs are intended to obtain the consent of local authorities, historically responsible for land-use given to refusing local developments, who have every reason to do so given the effects new supply would have on the price of their stock. CA should be allocated as to one percent to local authorities, representing an endowment of c£1.4bn per authority; and 5% to neighbouring households, representing c£700k per household.[9] We see these allocations as necessary but far from sufficient, as touched upon in (2) above. Only a change in national sentiment will give permission to local voters to accept these financial incentives and revisit their opposition, eventually to the exte3nt that their MPs are able to stand aside without putting their seats at risk.

Developers - 65% of issue[10] - In order to create the requisite upgrade in scale and quality of UK housebuilding, the current industry would have to be properly reimbursed for extending its efforts. A green belt build-rate of some 257,000 houses per annum is higher than the rate achieved throughout the entirety of the UK in 46 of the 72 postwar years for which the ONS provides records for.[11] The award of 65% of the CAs to developers in lieu of title to the underlying land is intended to incenticise them to do so. If expendient, piecemeal negotiations with housebuilders heavily in land-banks could address any disappointed expectations.

The level of issue providers for an operating profit in line with industry standards of 17% of revenues.[12] Developers would set the prices of the houses they sell; and (if following the hybrid proposal for the relation of securities to land in (10) below) would benefit from price leadership. They would work to an eighteen year master-build timetable, with the benefit of prolongued learning-curve cost reductions. The scheme also gives housebuilders the option to remove development risk from their balance sheet piecemeal, instead locating it with sceondary market investors.

Retained - 24% of issue[13] - HMG should retain 24% of the total value of CAs unissued, as a buffer for unbudgeted development expenditures. They would also defray such expenditure as developers might customarily bear under Section 106 'planning gain' agreements.[14] Unissued CAs would represent revenue for the exchequer on redemption or in the secondary market, and nearly 37x the level of receipts from taxation under the current regime.[15]

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8 For details see quantitative material: Position of local interests, tables 15 to 21.

9 See quantitative material: Table 17. Closing value of CAs for locals, et seq.

10 For details see quantitative material: Position of developer, tables 22 to 27.

11 See quantitative material: Table 27. UK housebuilding 1949-2020.

12 See quantitative material: Table 25. Operating profit of top four UK housebuilders.

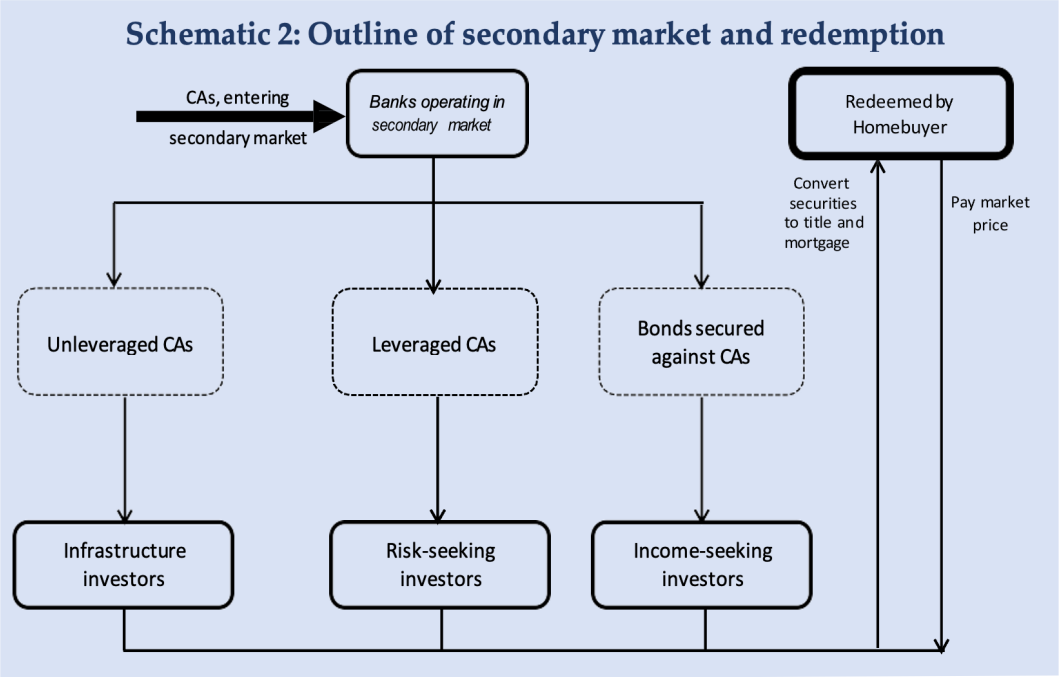
13 For details see quantitative material: Position of HM Treasury, tables 28 to 30.

14 Refer to legislation set out at https://www.legislation.gov.uk/ukpga/1990/8/section/106; and guidance set out at https://www.gov.uk/guidance/planning-obligations, in conjunction with embedded links.

15 As note 4 above: refer to quantitative material. Table 30. Taxation under current regime.

Secondary Market

Schematic 2 sets out how CAs enter the secondary market for eventual redemption:



Schematic 2 envisages capital instruments derived from CAs, embracing leverage which caters for risk-seeking investors and serving as the collateral for bonds for income-seeking investors. The offer to the buy-side are new tax-exempt asset-classes, with characteristics falling out of the underlying economics: price appreciation of nearly 300x on unstructured CAs, more on leveraged instruments; plus bonds and convertibles with solid collateral, coupled with attractive coupons and a full range of tenors. These are intended to cater for the appetites of infrastructure investors, high-risk / high-yield investors, and long-only funds.[16]

Outcome

On our default assumptions, the outcome of this scheme would be:

- Some 1.8m houses at the end of year ten, and 3.8m houses by the end of the timetable, accommodating some 9.5m residents, many from elsewhere in the region;[17]

- Cost levels and valuation benchmarks making for prices which are 15% below average prices for London houses, but with twwice as much inside and outside space as current new builds and at modern levels of amenity and energy efficiency.[18]

- Returns to HMG of up to £938bn by the end of the timetable,[19] nearly 37x the taxation

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16 For details of capital instruments, see quantitative material: Table 31. Schedule of securities.

17 See quantitative material: Table 32. Twenty year timetable.

18 See quantitative material: Table 26. Housing statistics.

19 As note 20 above: refer to quantitative material. Table 32. Twenty year timetable.

on developers' receipts to be expected under the current regime;[20]

- a secondary market in unstructured CAs at its maximum value, plus structured securi -ties.[21]

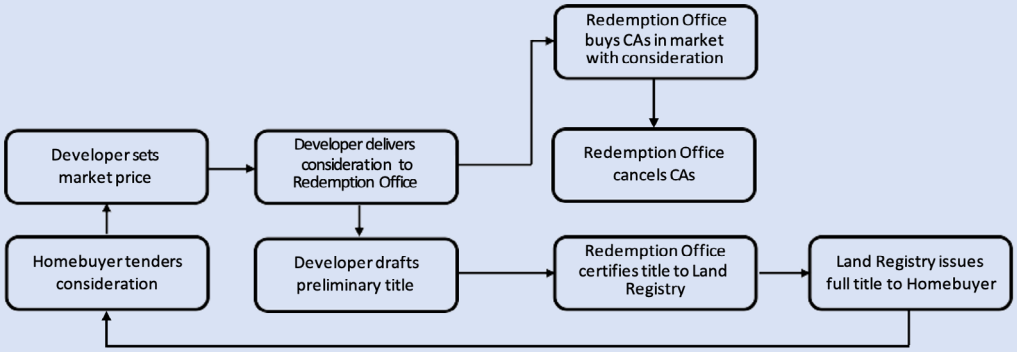
Redemption

Mechanics are required which:

- Redeem CAs for cancellation at the market price in the secondary market;
- recognise the complications of secondary market securities, including any structured securities and bonds;
- provide for arms-length price discovery for completed new builds; and
- delive clear title to the homeowner, qualifying for collateral for mortgages.

Schematic 3 sets out a solution, embracing the innovation of a Redemption Office, to act as an intermediary between the developer, the homebuyer, and the Land Registry. The document-flow may serve as a model application for a blockchain-technology system.

Schematic 3: Mechanics of redemption



Regional Implications

For a century, the UK has pursued policies to direct jobs, investment, and decision-making to the regions. This fiscal aspect of this redistribution has been funded by the dynamism of London and its surroundings. This proposal caters for that dynamism, which has led to Europe's only global cluster, together with a growth in population which has intensified the pressure on housing. This scheme need not be confined to the South East: it can be extended to the provincial green belts, though their characteristics will make for different economics and densities.

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20 As notes 4 and 18 above: refer to quantitative material. Table 30. Taxation under current regime.

21 As note 19 above: refer to quantitative material. Table 31. Schedule of securities.

The metropolitan scheme set out in this paper may be expected to lead to new local government arrangements. This is because it contemplates housing occupying 3.3x the area administered by the Greater London Authority and adding a nominal 33% to the residential capacity of the south-east.

Regulatory Reform

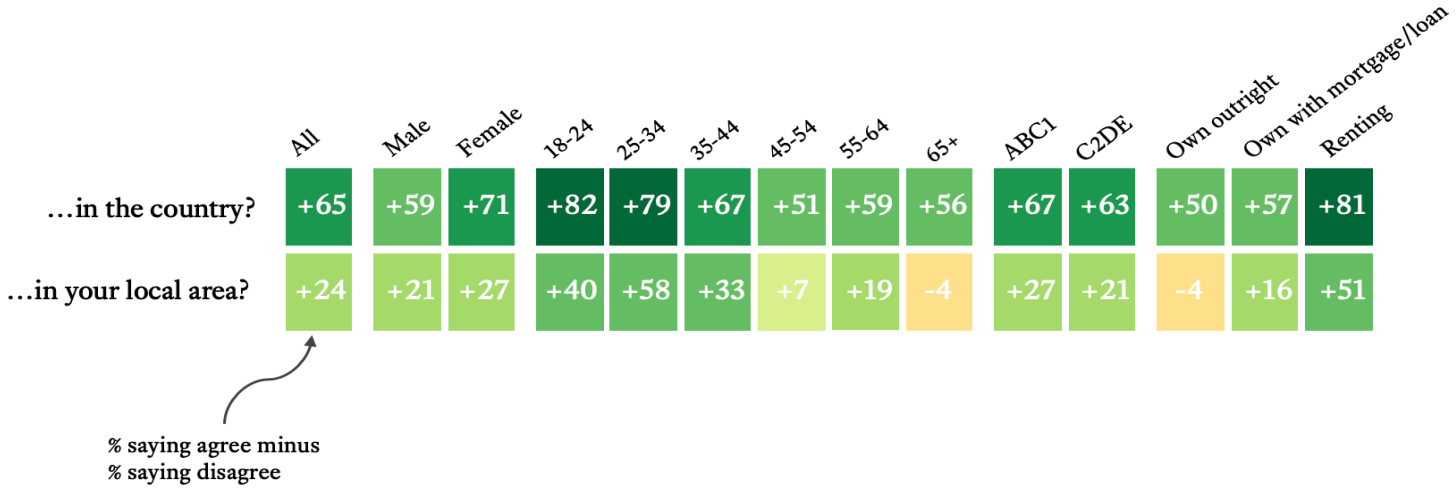
Reform of this kind would call for new primary legislation to:

- Deregister the green belts, relocating planning authority to new bodies with further powers to rewrite building and fire regulations impeding best practice and to revisit selected building listings;
- set aside the Crichel Down rules on compensation and S106 impositions on developers;
- authorise the regime for the CAs contemplated in this paper;
- reform the tax regime applicable to these developments;
- provide for the establishment fo the Redemption Office described above; or for such responsibilites to be assumed by the Land Registry;
- estblish new arrangements for local government as described above.

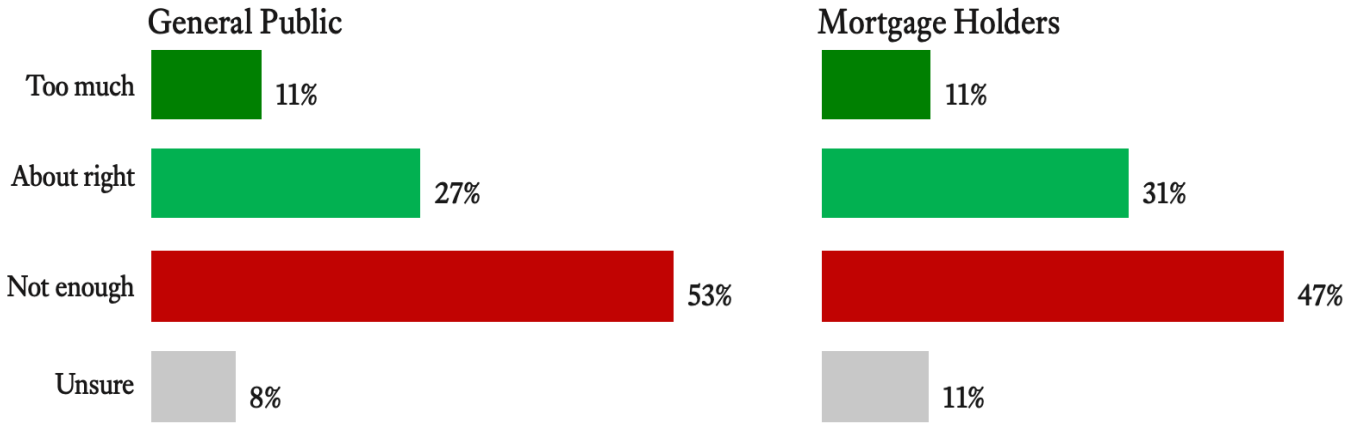
Electoral Feasibility

Partnering with JL Partners, the Adam Smith Institute conducted a poll with 1,000 members of the general public and 1,000 mortgage holders (total 2,000) across the country about the feasibility of the scheme.

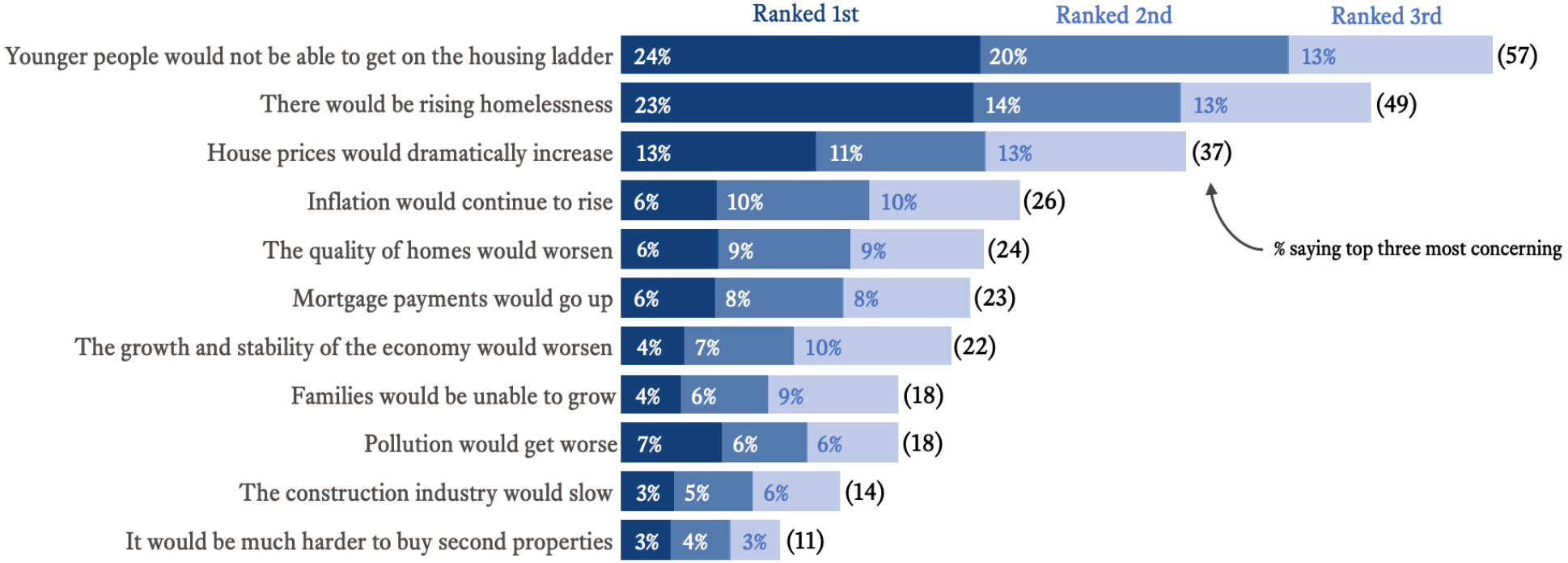
Setting the scene, we found that young people and renters overwhelmingly agreed that there is a housing crisis.



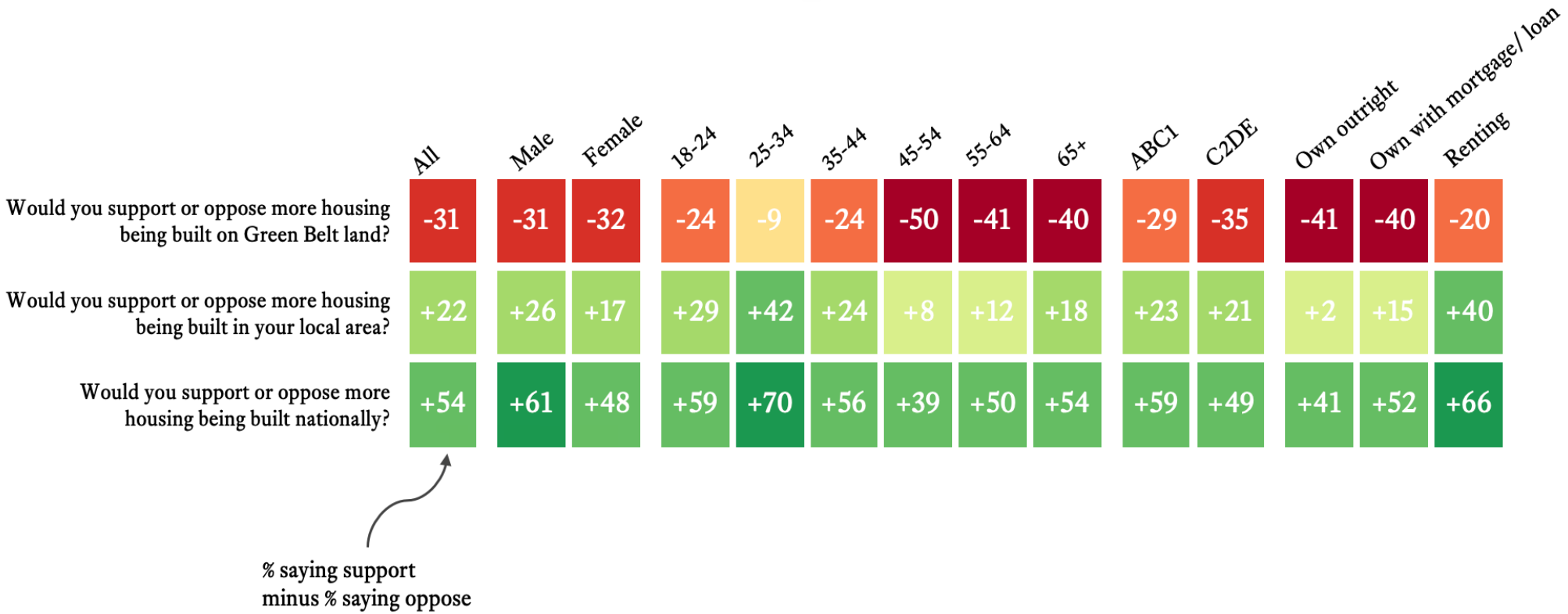
Given that the main age of electoral turnout are above 50 years old, it is important to convince local incumbents to permit housebuilding. We found that a majorty of the general public (53%) and 47% of mortgage holders believed that there was inadequate affordable housing in their local area.



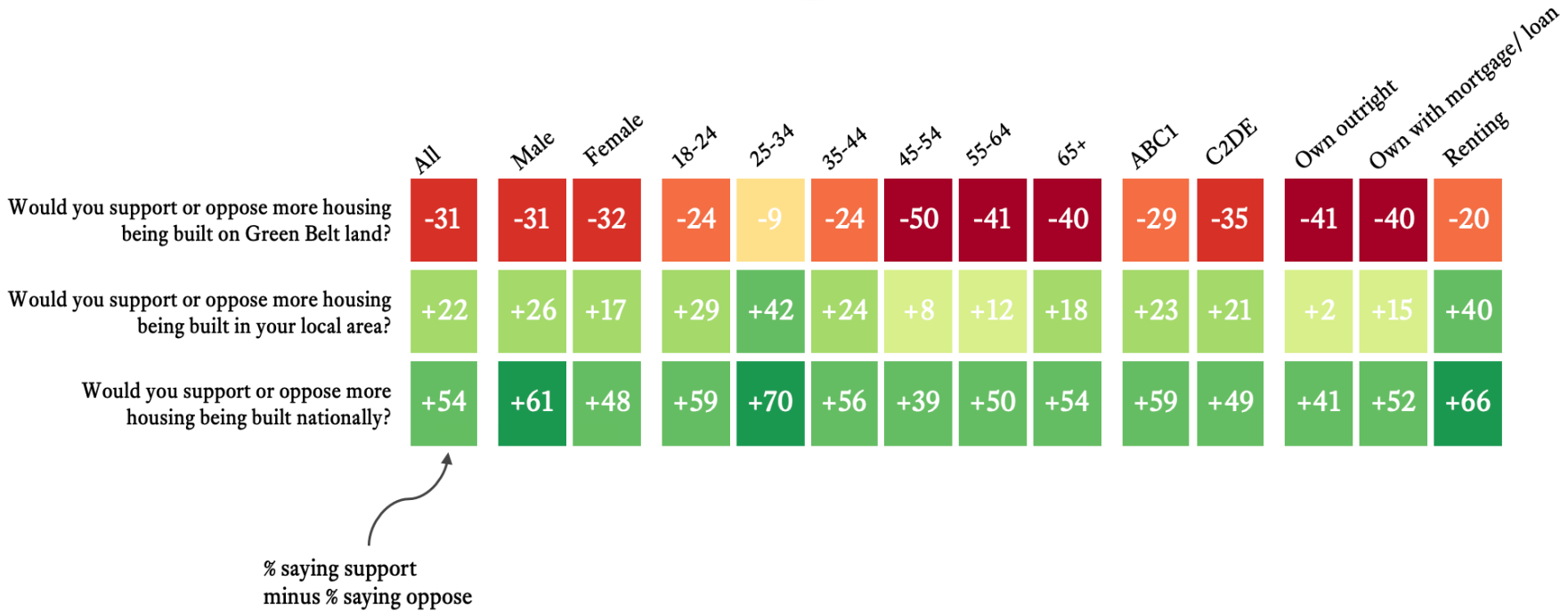
Given these concerns about affordability, we found that the majority concern for all parties was that "Younger people would not be able to get on the housing ladder", "There would be rising homelessness", and "House prices would dramatically increase", for both the general public and mortgage holders.



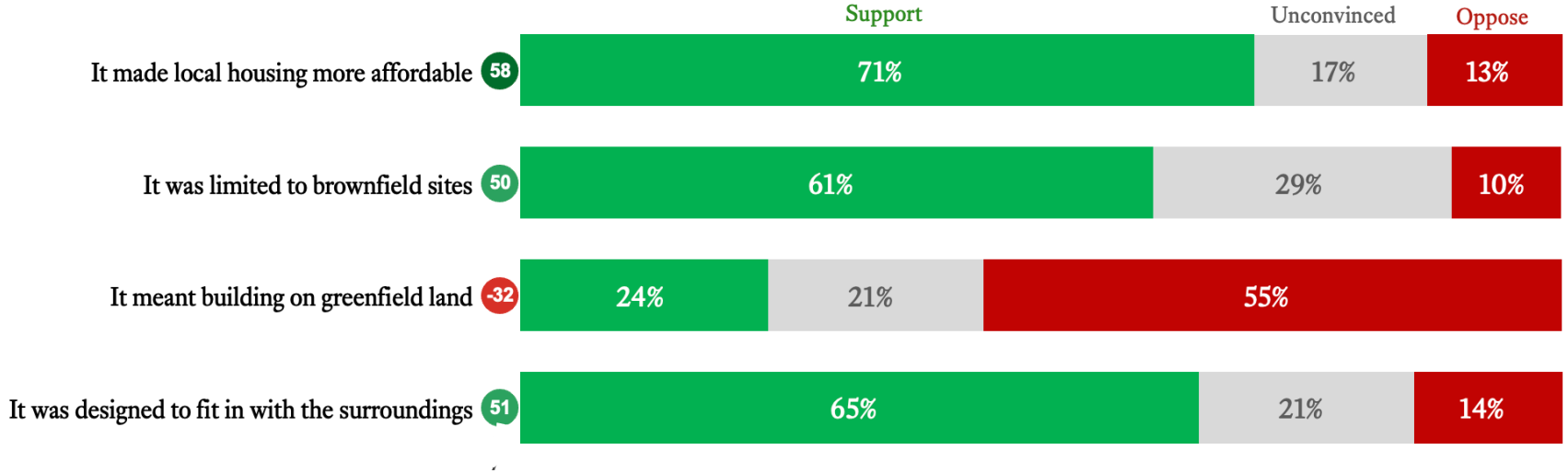
Given this overriding concern, we asked what the concerns around housebuilding were. Mortgage holders tended to be more resistant to housebuilding, where as people aged between 25 and 34, and renters, were most emphatic about building more homes. Overriding this was a resistance to building on the green belt, which is still perceived as pastueral nature rather than a designated area designed to slow down urban sprawl. Given the areas where the housing crisis is the most acute are high-growth, dense, urban areas, the green belt continues to essentially suffocate the growth plans for cities and urban areas.



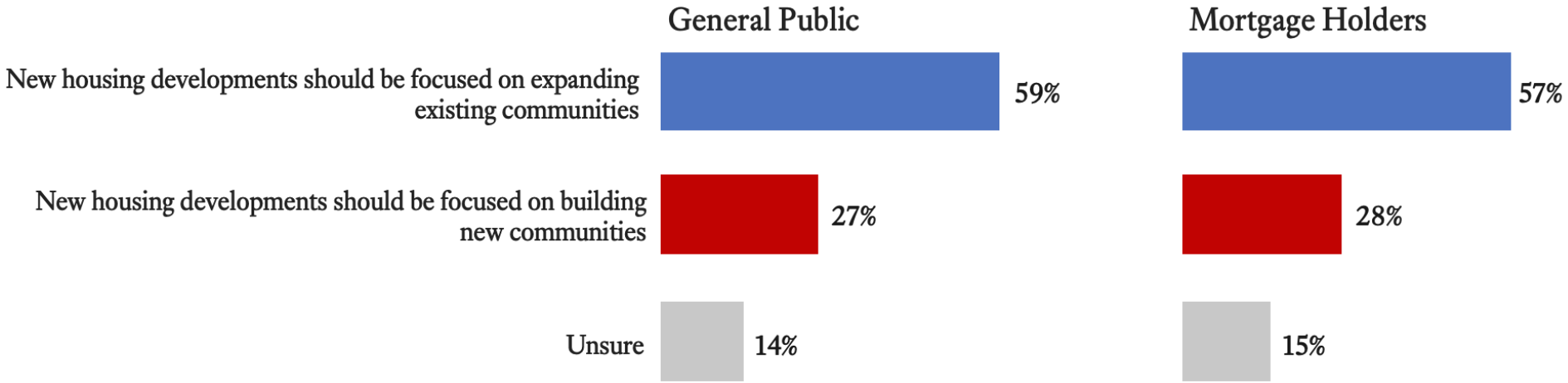
Preferences for housing being built nationally rather than locally are of little surprise given the tendency for voters to prefer externalising perceived costs to wider areas, such as expressed preferences of environmental preservation and the disruption caused by construction. However, housing must be built in someone's locality, so other policies should be considered to convince people.



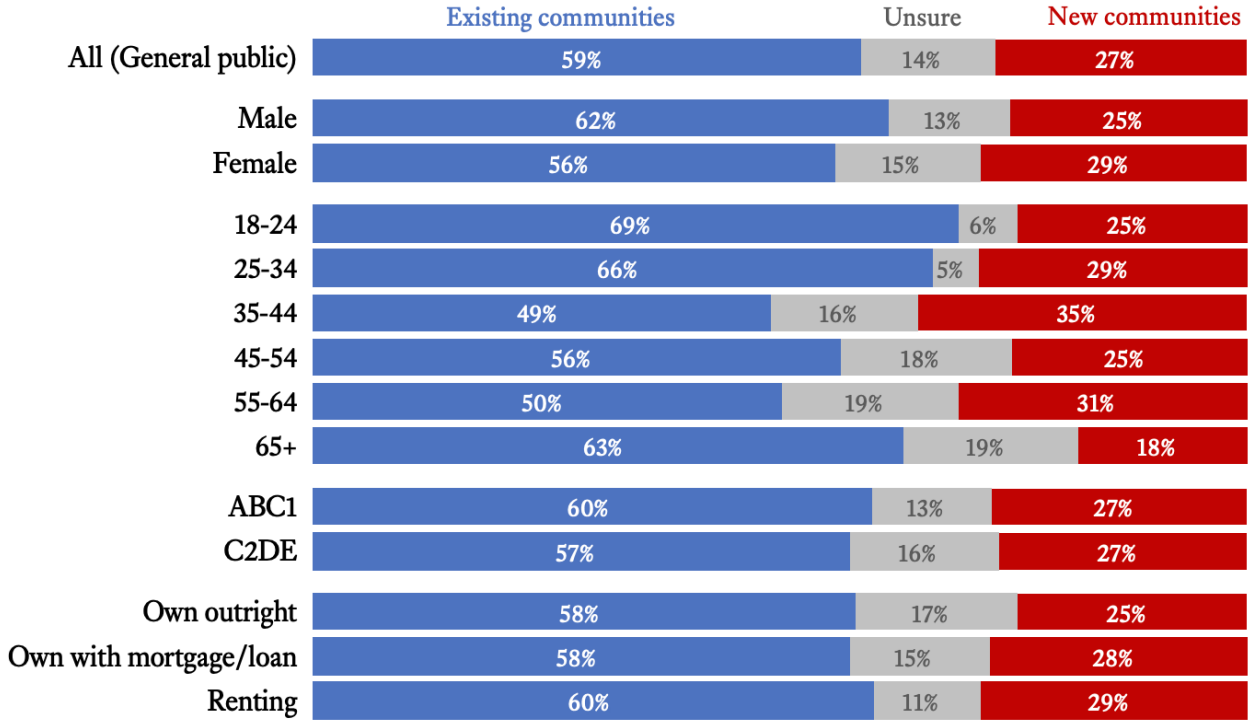
People prefer local housing to be affordable and limited to brownfield sites, and importantly designed to fit in with the local surroundings using similar local designs, materials, and sizes.



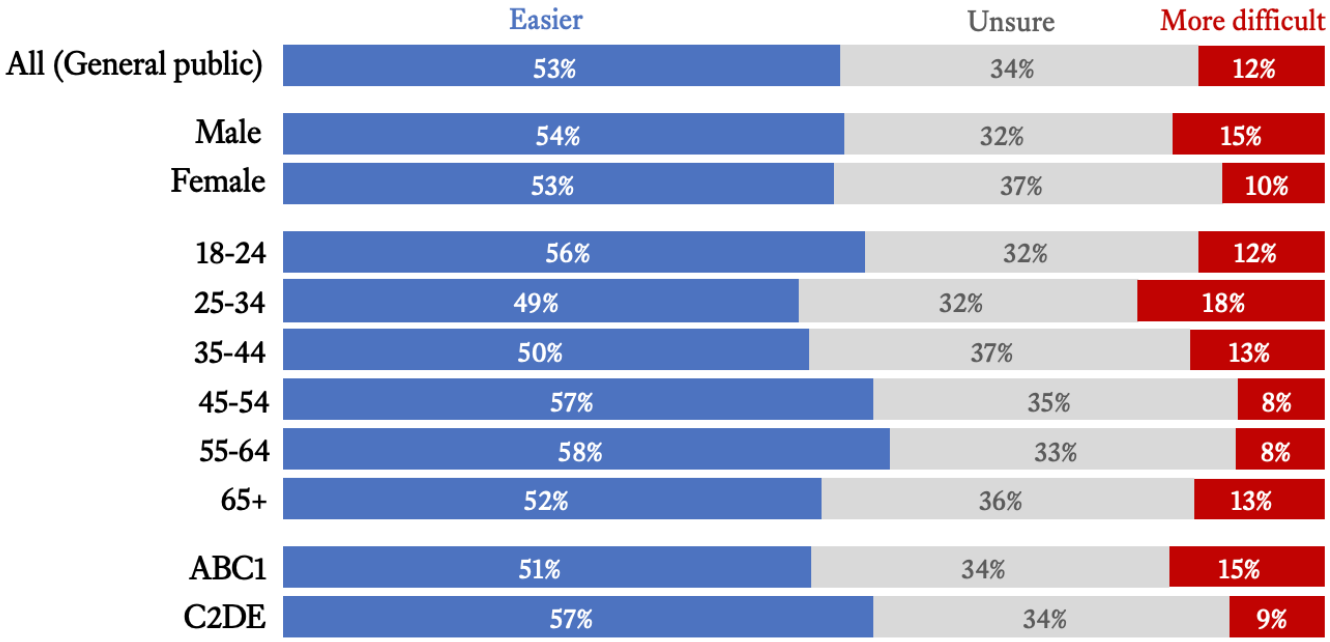
Following recent announcements by the Labour Party to build New Towns, this would be opposed by the public and mortgage holders, who prefer building to take place in existing communities in order to expand the current conubations.



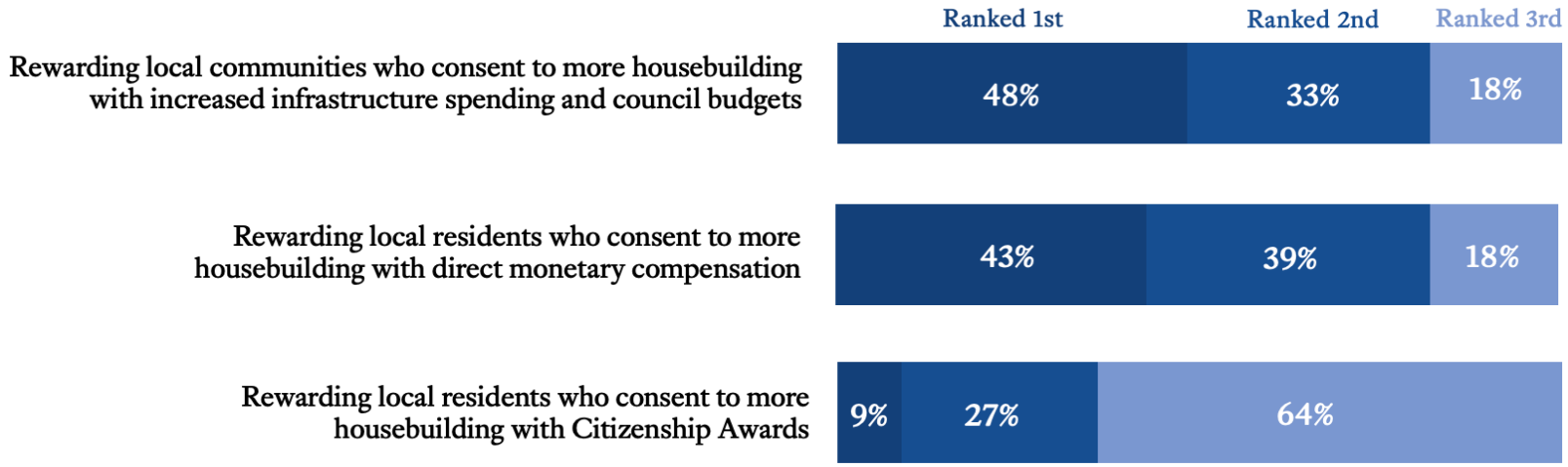
This trend seems to hold across the board, regardless of age, social class, ownership model, or sex.



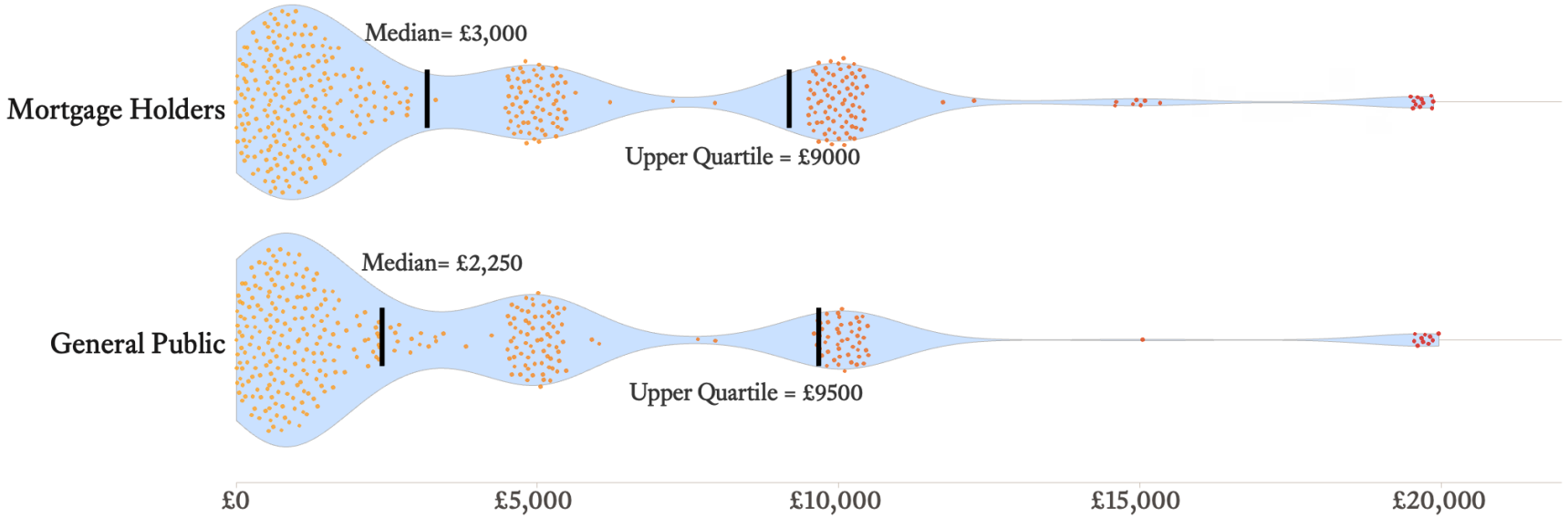
Nonetheless, there is a universal sentiment that local communities should be given more power to block developments in their community, placing additional concerns around general planning reform in order to make planning and building easier.



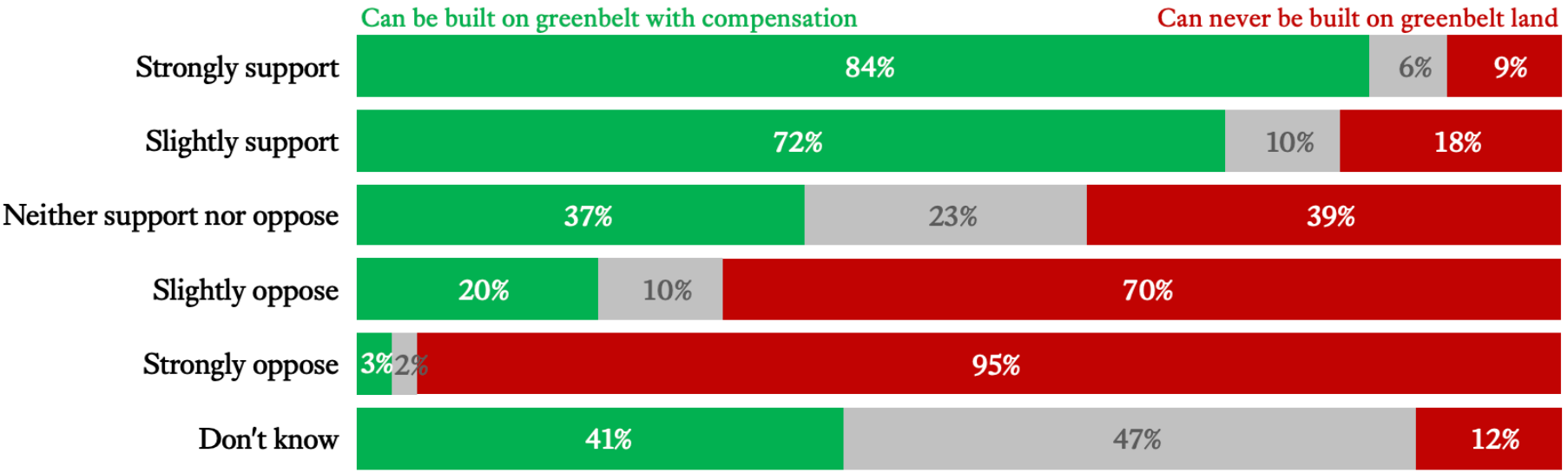
The 'Homes for All' policy paper, therefore seeks to breach this hurdle through direct compensation to local residents and / or substantial direct investment within local infrastructure, which is supported by both the public (former) and mortgage holders (latter).



Direct financial compensation tended to be on the lower end, despite the high yield of reguturn that a CA security could garner. Polling showed that the median expected compensation by potential recipients was around £3,000 for mortgage holders, and £2,250 for the general public.

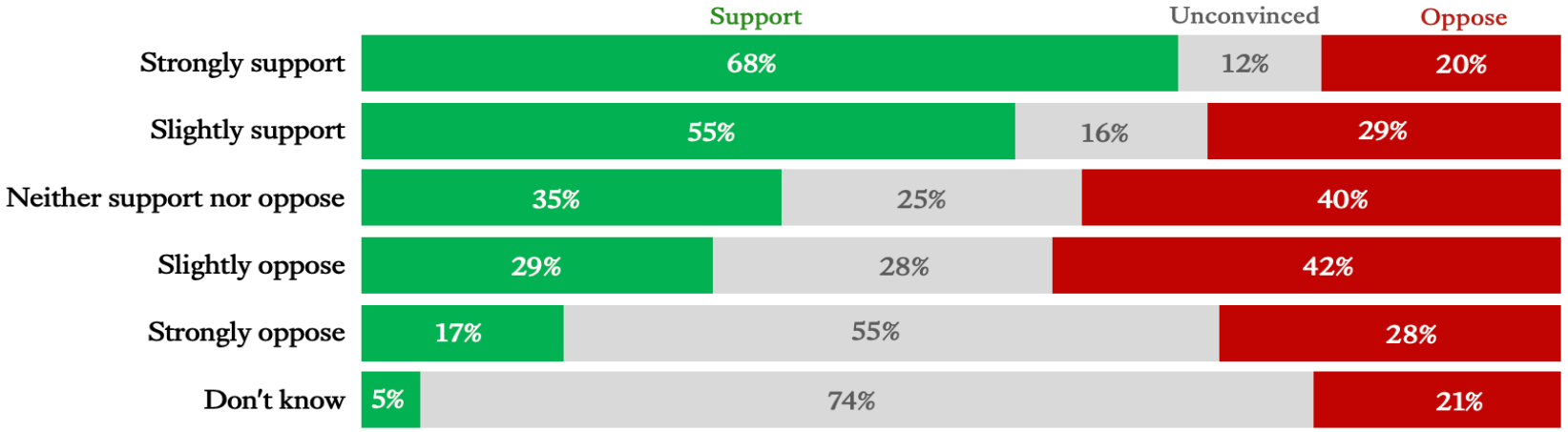


Indeed, financial compensation was of great interest to those who oppose building on the green belt, winning them over.



As a further string in the policy's bow, 1 in 3 of those who slightly oppose building in their local area support the Homes for All policy.

Based on whether they support or oppose building in the local area



Appendix (Auctions)

Alternative methods to Compulsory Purchase Orders also exist. Developers may be expected to tolerate the higher prices to which auctions give rise, in contemplation of the proceeds of the learning-curve cost-reductions associated with large-scale and prolonged production. Private housing in the UK has not seen this since the 1930s, so any auctions should encourage overseas participation, also desirable as introducing global best practice. This follows the precedent of the auctions for mobile telephony, using the model of the auctions for 3G mobile spectrum between 1999 and 2001, which took place in much of the world.

Introduction

ASI's proposal calls for compulsory purchase orders (CPOs) for undeveloped land in consideration of securities (CAPITALs or CAs) worth (on redemption) 14.9x the price of agricultural land. During ASI's feedback programme, landowners have stated that they see CPOs as objectionable as an extension of state power. This hints that they think they can get more from the open market than the five percent of CAs allocated to them under the current proposal. It is unclear if developers join them in their objection: if so, they may think that open markets would let them pay less for land than currently envisaged. This circle is squared in the Economics section in paragraphs below.

Under the default assumptions in this proposal, landowners obtain some £196bn in redeemed CAs. There is no point in auctions unless they raise more. The closest precedent is the worldwide round of auctions for 3G mobile spectrum, occurring between 1999 and 2001 and raising some $101bn:[22]

- Public objectives included maximising fiscal receipts - sometimes with novel or iterative rounds of bidding - maximising coverage and promoting competition; there was also provision for incumbents.
- Bids were organised by territory and by spectrum, in certain instances combining attractive and unattractive parcels.
- The authorities rigged the contests in Germany and Italy, as well as possibly in France, either to maximise revenues (German and later US rounds, the latter without rigging), or to preserve the position of state-owned or otherwise preferred incumbents.
- There was a strong suggestion of collusion between participants in Germany.
- Some bids were spoilers; on at least one occasion where such a bid unexpectedly won, it was withdrawn.
- From the outset in Europe, auctions attracted the participation of financial interests, who

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22 Sources: International Telecommunications Union. https://www.itu.int/ITU-D/tech/events/2003/slovenia2003/Presentations/Day%202/2.2.4_Passerini_Annex1.pdf . Extracted 31 August 2023; Quantitative material, table 13. Basic statistics of CAPITALs.

These figures are incommensurate given the chaos of the 3G auctions, the opacity of the authorities, subsequent exchange rate movements and inflation, the need to discount the future value of redeemed CAPITALs, and the complications of several rounds of land auctions. Even so, the precedent serves our purposes, in that the figures represent economic exercises of the same order of magnitude and the deployment of concomitant political capital.

then got out early, taking profits.

- Overseas interests were permitted in the UK and certain European territories from the outset, as well as in the US after regulatory reform, subject to limits on participation.

In sum, auctions were a successful mechanism for attracting bidders, price discovery and achieving other public objectives, but were subject to official foibles and general chicanery. The implications are explored below.

Auctions for development land

Fundamentals

The precedents show the authorities acting energetically to promote public objectives. On the other hand, the record of foibles and chicanery denies the notion that auctions are easy solutions to complex problems.

Now, to consider whether auctions apply to the land itself, or to the CAs with which land is to be bought. Land auctions are more straightforward and are explored below. Nonetheless, a scheme of auctions for CAs justifies a brief examination, as it seems to reinforce the current proposal. In particular, such a scheme would establish an immediate premium for the securities. On the other hand, it is not apparent how to combine arrangements for auctioning CAs with a backstop of CPOs, at or around the levels set out in the default assumptions in this proposal. In addition, such a scheme doesn't answer the above problem, as it fails to provide for price discovery of the underlying land without supplementary processes, either the further auction of land discussed below, or the very CPOs under criticism. Given such complications, an auction for CAs may be ruled out.

Economics

It is unclear how auction-winners might make a profit on their bids. Although the value of development land multiplies over the development process – the figures in Homes for All show a near-300x appreciation in value – the modelling allocates this appreciation tightly.

An auction process would be expected to maximise prices. If developers pay more than currently envisaged, either directly or to speculative intermediaries, how are they to get it back? It is safe to assume that they wish to maintain or improve the operating margins at the seventeen percent at present prevailing among industry leaders and provided for under the proposal's default assumptions.

In consequence, developers must get their returns with either higher prices or savings in expenditure elsewhere. The benchmark for selling prices in the current proposal is average London levels, so higher prices will run into competitive headwinds; they will also be an impossible ask politically. These factors rule out raising returns in this way.

The alternative is savings in expenditure. Large parcels and prolonged timetables make for learning-curve cost-reductions in large-scale production. British housebuilders in the private sector have not operated on such scales since the 1930s, which makes it impossible to work up locally-sourced figures.

Anything from ten to ninety percent reduction from initial costs is attainable in other industries. This is not confined to the reductions familiar from semiconductors; for example, plane manufactures employ "programme accounting", with annual financial statements which recognise aircraft production at the mid-point of the expected build programme, which is the level at which costs are accrued and prices are set. Large scale developers are in similar circumstances.

Preliminary modelling shows that to maintain developers' operating margin of 17%, for every 10% by which landowners' receipts exceed the £196bn of redeemed CAs allocated in this proposal, developers must obtain a learning-curve reduction of 1.85% in construction costs.[23]

The challenge for developers will be balancing the economies of common design and building elements, with satisfying individual purchasers, and making for communities which are aesthetically, commercially and socially satisfactory. This reinforces the argument for introducing international developers and professionals, to promote best practice in design, financing, materials sourcing, project management and technology.

Questions about mechanics

Question. Who organises?
Answer. A statutory body, established as the planning authority, with powers to issue CPOs for land unsold at auction, as a backstop.

Question. What consideration, cash or CAPITALs?
Answer. The discussion of fundamentals above argues for cash. The five percent of CAPITALs available to landowners under the default assumptions in this proposal would be reallocated to developers in return for their obligation either to participate in the auctions or treat with successful third-party bidders.

Question. What preparations?
Answers.

1. A bidders' conference or other consultation with potential participants, inter alia to consider criteria for prequalification, tract sizes, specifications and a positive regulatory environment, in particular replacing legacy building and fire codes with international best practice.

2. The formation of tracts suitable for large-scale development out of the farmers' fields and suchlike, now in place. Tracts should be large enough to offer the benefits of learning-curve cost-reductions, regulated to prevent expanses of undue uniformity.

3. Prequalification of bidders, to confirm pertinent experience, financial backing, and so on.

Question. What specifications?
Answer. Set at a high level, eg, targets for accommodation, overall densities, diversity in size and style of accommodations and reservation of land for infrastructure. This is to encourage bidders to propose solutions which vary from tract to tract, making for competition on completion.

Question. Who might be expected to bid?
Answer. Development consortia or intermediary speculators, including Sovereign Wealth Funds and infrastructure investors, noting that all these may overlap.

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23 This assumes that costs are accrued as though at the mid-point of a linear reduction over the construction period.

Question. What competitive regime?
Answer. Given the territorial nature of development, direct competition is impossible, but the authorities should promote competition between consortia for financial backing and global skills during bidding; and between tracts for house buyers on completion.

Questions. How much reservation for incumbents? How much encouragement for new entrants? What provision for international developers?
Answer: Prequalification would encourage domestic players to form consortia with international operators.

Question. What conditions for the financial bidders touched on above, either as members of a development consortium, or acting solus as speculative intermediaries selling on to developers, or in some combination?
Answer. Rules for financial bidders should be permissive rather than restrictive, to encourage entrants, though this is not to rule out obligations to participate in the secondary market for CAs.

Appendix (Qualitative Materials)

Table 1. Value of land - £/ha (from table 11)

Agricultural	25.5
Residential	7,610

Table 2. Density assumptions

Household dispersal - units/ha	10
Prop'n of land retained for non residential use	25%

Table3. Construction assumptions

Master programme	15	years
Housebuilding period	3	years
Remediation/infrastructure costs	1,250,000	£/ha
Build costs	2,360	£/m^2
Built area	160	m^2

Table 4. Allocation of unlocked value

Landowners	5%
Development consortia	65%
Local authorities	1%
Existing homeowners etc	5%
Treasury	24%

Table 5. Basic statistics for CAs	**Single hectare**	**Overall**
Areas - ha	1.000	513,860
Benchmark values at outset - £	25,500	13,103,430,000
Benchmark values on completion - £	7,610,000	3,910,474,600,000
Benchmark values over project - £	3,817,750	1,961,789,015,000

Assumes linear construction and appreciation.

Table 6. Cumulative value of HMG holdings, yr 10, £bn

		Master programme - years				
	626	10	12	15	16	18
Allocation of RAs to HMG	20%	782	652	521	489	434
	22%	860	717	574	538	478
	24%	939	782	626	587	521
	27%	1,056	880	704	660	587
	30%	1,173	978	782	733	652

Table 7. Houses built, year 10, mn

		Master programme - years				
	1.8	7	10	15	18	20
Build'g progr'm - yrs	1	5.0	3.5	2.3	1.9	1.7
	2	4.4	3.1	2.1	1.7	1.5
	3	3.9	2.7	1.8	1.5	1.3
	4	3.3	2.3	1.5	1.3	1.2
	5	2.8	1.9	1.3	1.1	1.0

Table 9. Houses built, year 10, mn

		Land retained as non residential				
	1.8	10%	20%	25%	33%	40%
Metropolitan units/hectare	6	1.3	1.2	1.1	1.0	0.9
	8	1.7	1.5	1.4	1.3	1.2
	10	2.2	1.9	1.8	1.6	1.4
	12	2.6	2.3	2.2	1.9	1.7
	15	3.2	2.9	2.7	2.4	2.2

Table 10. Green belt, ha

Metropolitan green belt [1]	513,860
Provincial green belt, hectares [1]	1,120,320
Total green belt	**1,634,180**

Table 11. Value of land, £/ha

Average value of adjacent agricultural land [2]	25,500
Value of residential land [2,3]	7,610,000
Unlocked value	7,584,500
Gross unlocked value -£bn	**3,910**

Table 12. Areas of metropolitan green belt and GLA, ha

Area of GLA	157,200
London green belt	513,860
Ratio	**3.27**

1. Taken from Ministry of Housing, Communities and Local Government. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/788115/Green_Belt_Statistics_England_2017-18.pdf

2. Taken from local authority partnerships adjacent to London in Valuation Office Agency https://assets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F923759%2FVOA_land_values_2019.xlsx

3. Value for Havering, least valuable London borough.

Memo: Sanity checks

Final land value		
4,086,588,904,000.00		4.08659E+12
Less retained for infrastructure etc		
25%		
3,064,941,678,000.00		
3,910,474,600,000		3.91047.E+12
9,590,969,024,771.73	1.E+13	

Basis for sanity check

Area of UK	24.4	m hectares
Pasture	28.71%	
Arable	27.05%	
Principally agriculture	0.52%	
Complex cultivation	0.15%	
	56.43%	
Agricultural	13.7	m hectares
Discontinuous urban	5.33%	
Industrial or commercial	0.82%	
Green urban areas	0.27%	
Continuous urban	0.13%	
	6.55%	
Urban	1.6	
Value £m	9,590,969.02	

Composition of land-use
https://www.sheffield.ac.uk/news/nr/land-cover-atlas-uk-1.744440

Position of original landowner

Allocation of CAs	**5%**

Table 13. Basic statistics of CAs	**Single hectare**	**Overall**
Area - ha	0.050	25,693
Benchmark values at outset - £	1,275	655,171,500
Benchmark values on completion - £	380,500	195,523,730,000
Benchmark values over project [4] - £	190,888	98,089,450,750

Table 14. Value of CAs if held to close	**£k/ha**	**Apppreciation [5]**
	380,500	14.9x

4. Assumes linear construction and appreciation.

5. By comparison to value of adjacent agricultural land; refer to table 12, note 3.

Position of local interests

	Local authorities	**Neighbours**
Allocation of CAs	**1%**	**5%**

Table 15. Basic statistics of CAs - Local authorities	**Single hectare**	**Overall**
Area - ha	0.01	5,139
Benchmark values at outset - £	255	131,034,300
Benchmark values on completion - £	76,100	39,104,746,000
Benchmark values over project[6] - £	38,178	19,617,890,150

Table 16. Basic statistics of CAs - neighbours	**Single hectare**	**Overall**
Areas - ha	0.050	25,693
Benchmark values at outset - £	1,275	655,171,500
Benchmark values on completion - £	380,500	195,523,730,000
Benchmark values over project[6] - £	190,888	98,089,450,750

Table 17. Closing value of CAs for locals

Allocated to local authorities - £m	39,105
Allocated to local individuals - £m	195,524
Per authority - £m	1,504
Per household - £k	696

6. Assumes linear construction and appreciation.

Table 18. Number of green belt authorities

Green belt local authorities	67
Eighty percent of cum area at table 21	26

Table 19. Estimate of green belt population

Total metropolitan green belt - ha	513,860
Express in sq km	*5,139*
England rural population density/sq km [7]	68.3
Population arising	351,008
Assume for adjacent	2.00x
Estimate arising	702,016
Persons/household	2.5
Households	280,806

Table 20. Calculation of rural density

England area	130,279	sq km
Proportion rural [8]	90%	
England rural area	117,251	sq km
England rural population - no [9]	8,009,200	
Density	68.3	

7. Taken from table 20 below.

8. Taken from https://lordslibrary.parliament.uk/fact-file-rural-economy/

9. Taken from *UK Rural population* , DEFRA, 2021.

Table 21. Local authorities, ordered by area of metropolitan green belt

		Hectares	Proportion	Cumulative prop'n
1	Sevenoaks	34,400	6.69%	6.69%
2	Epping Forest	31,680	6.16%	12.85%
3	Central Bedfordshire	28,220	5.49%	18.34%
4	Guildford	24,040	4.68%	23.02%
5	Tandridge	23,300	4.53%	27.55%
6	Waverley	21,080	4.10%	31.65%
7	Mole Valley	19,640	3.82%	35.47%
8	East Hertfordshire	17,530	3.41%	38.88%
9	Chiltern	17,380	3.38%	42.27%
10	Tonbridge and Malling	17,060	3.32%	45.58%
11	Windsor and Maidenhead	16,480	3.21%	48.79%
12	Wycombe	15,630	3.04%	51.83%
13	North Hertfordshire	14,250	2.77%	54.60%
14	Brentwood	13,700	2.67%	57.27%
15	St Albans	13,140	2.56%	59.82%
16	Chelmsford	12,850	2.50%	62.32%
17	Rochford	12,570	2.45%	64.77%
18	South Bucks	12,350	2.40%	67.17%
19	Thurrock	11,920	2.32%	69.49%
20	Dacorum	10,690	2.08%	71.57%
21	Welwyn Hatfield	10,250	1.99%	73.56%
22	Reigate and Banstead	8,890	1.73%	75.29%
23	Hertsmere	8,040	1.56%	76.86%
24	Bromley	7,730	1.50%	78.36%
25	Gravesham	7,670	1.49%	79.85%
26	Tunbridge Wells	7,130	1.39%	81.24%
27	Basildon	6,950	1.35%	82.59%
28	Three Rivers	6,840	1.33%	83.92%
29	Runnymede	6,140	1.19%	85.12%
30	Havering	6,010	1.17%	86.29%
31	Elmbridge	5,620	1.09%	87.38%
32	Hillingdon	4,970	0.97%	88.35%
33	Aylesbury Vale	4,800	0.93%	89.28%
34	Surrey Heath	4,190	0.82%	90.09%
35	Dartford	4,110	0.80%	90.89%
36	Woking	4,030	0.78%	91.68%
37	Bracknell Forest	3,840	0.75%	92.43%
38	Uttlesford	3,810	0.74%	93.17%
39	Spelthorne	3,320	0.65%	93.81%
40	Broxbourne	3,310	0.64%	94.46%
41	Enfield	3,060	0.60%	95.05%
42	Wokingham	2,900	0.56%	95.62%
43	Castle Point	2,750	0.53%	96.15%
44	Barnet	2,380	0.46%	96.61%
45	Croydon	2,310	0.45%	97.06%
46	Redbridge	2,070	0.40%	97.47%
47	Epsom and Ewell	1,560	0.30%	97.77%
48	Medway	1,340	0.26%	98.03%
49	Hounslow	1,230	0.24%	98.27%
50	Bexley	1,120	0.22%	98.49%
51	Harrow	1,090	0.21%	98.70%
52	Slough	860	0.17%	98.87%
53	Waltham Forest	840	0.16%	99.03%
54	Harlow	640	0.12%	99.15%
55	Kingston upon Thames	640	0.12%	99.28%
56	Sutton	620	0.12%	99.40%
57	Southend-on-Sea	610	0.12%	99.52%
58	Barking and Dagenham	530	0.10%	99.62%
59	Maidstone	530	0.10%	99.72%
60	Watford	410	0.08%	99.80%
61	Ealing	310	0.06%	99.86%
62	Stevenage	260	0.05%	99.91%
63	Luton	140	0.03%	99.94%
64	Richmond upon Thames	140	0.03%	99.97%
65	Newham	80	0.02%	99.98%
66	Haringey	60	0.01%	100.00%
67	Mid Sussex	20	0.00%	100.00%
	TOTAL	**514,060**	**100.00%**	

Position of developer

Allocation of CAs	**65%**

Table 22. Basic statistics of CAs	**Single hectare**	**Overall**
Area - ha	0.650	334,009
Benchmark values at outset - £	16,575	8,517,229,500
Benchmark values on completion - £	4,946,500	2,541,808,490,000
Benchmark values over project[10] - £	2,481,538	1,275,162,859,750

Table 23. Developers' income, according to realisation of CAs

	Single hectare	**Overall**
Realised at outset - £	16,575	8,517,229,500
Realised on completion - £	4,946,500	2,541,808,490,000
Realised over project[10] - £	2,481,538	1,275,162,859,750

Table 24. Developers costs	**Single hectare**	**Overall**
Gross allocated land - ha	1.00	513,860
Dedicated to housing - ha	0.75	385,395
Build intensity- units/ha	10.0	10.0
Built area- m^2	160	160
Build cost - £/m^2 [11]	2,360	2,360
Housing cost - £	2,832,000	1,455,251,520,000
Remediation/infrastructure - £ [12]	1,250,000	642,325,000,000
Total costs	4,082,000	2,097,576,520,000
Operating profit	**864,500**	**444,231,970,000**
Operating margin	17%	17%

10. Assumes linear construction and appreciation.
11. Taken from Guidance on dereliction, demolition and remediation costs, Homes and Communities Agency, March 2015.
12. Taken from *Garden City & Large Sites, Financial Model User Guide*, HYAS, February 2020.

Table 25. Operating profit of top four UK housebuilders

	2022	2021	2020	2019	2018	2017	Average
Barratt	12%	17%	14%	19%	18%	na	17%
Persimmon	na	28%	28%	30%	31%	28%	29%
Bellway	na	22%	21%	11%	15%	9%	16%
Taylor Wimpey	na	19%	11%	20%	22%	21%	19%

Table 26. Housing statistics	**Single hectare**	**Overall**
No of houses built	7.5	3,853,950
Cost/unit	544,267	544,267
Price benchmark[13]	659,533	659,533
Memo: Average London price - £k[14]	*740,597*	

13. The "Price benchmark" is the selling price which would redeem all the CAs in issue at the value of developed land as though Havering; refer to table 11, note 3.
14. https://www.zoopla.co.uk/house-prices/london/ Extracted 22 December 2022.

Table 27. UK housebuilding, 1949-2020

		Model build rate greater?
Model build rate	256,930	
Housing completions, UK		
1949	205,260	Yes
1950	205,430	Yes
1951	201,870	Yes
1952	248,330	Yes
1953	326,830	
1954	354,120	
1955	324,430	
1956	307,680	
1957	307,590	
1958	278,640	
1959	281,570	
1960	304,250	
1961	303,190	
1962	313,650	
1963	307,720	
1964	383,200	
1965	391,240	
1966	396,010	
1967	415,460	
1968	425,830	
1969	378,320	
1970	362,220	
1971	364,480	
1972	330,930	
1973	304,630	
1974	279,630	
1975	321,940	
1976	324,770	
1977	314,090	
1978	288,620	
1979	251,760	Yes
1980	242,000	Yes
1981	206,630	Yes
1982	182,840	Yes
1983	209,030	Yes
1984	220,410	Yes
1985	207,460	Yes
1986	216,180	Yes
1987	225,500	Yes
1988	241,780	Yes
1989	221,050	Yes
1990	202,510	Yes
1991	191,020	Yes
1992	179,100	Yes
1993	185,660	Yes
1994	193,000	Yes
1995	199,120	Yes
1996	189,040	Yes
1997	191,110	Yes
1998	181,020	Yes
1999	181,990	Yes
2000	176,850	Yes
2001	174,090	Yes
2002	181,960	Yes
2003	190,490	Yes
2004	203,500	Yes
2005	205,740	Yes
2006	208,970	Yes
2007	223,590	Yes
2008	187,320	Yes
2009	157,140	Yes
2010	135,980	Yes
2011	140,720	Yes
2012	141,610	Yes
2013	135,590	Yes
2014	145,120	Yes
2015	172,010	Yes
2016	171,810	Yes
2017	193,690	Yes
2018	199,110	Yes
2019	214,160	Yes
2020	169,260	Yes
Count	72	46

Barratt	2022	2021	2020	2019	2018	
Completions	17,908	17,243	12,604	17,856	17,579	
Group revenue (£m)	5,267.90	4,811.70	3,419.20	4,763.10	4,874.80	
Profit from ops (£m)	646.6	811.1	493.4	901.1	862.6	Five year average
Operating margin	12.30%	16.90%	14.40%	18.90%	17.70%	
Adj op profit (£m)	1,054.80	919	507.3	904.3	869.6	
Adj op margin (%)	20.00%	19.10%	14.80%	19.00%	17.80%	18%

Persimmon		2021	2020	2019	2018	2017	
Revenues from housing		3,450	3,130	3,420	3,546	3,422	
Operating profit		967	862	1,037	1,092	966	
Operating margin		28%	28%	30%	31%	28%	29%

Bellway		2021	2020	2019	2018	2017	
Operating margin		22%	21%	11%	15%	9%	16%

Taylor Wimpey		2021	2020	2019	2018	2017	
		19%	11%	20%	22%	21%	19%

	2022	2021	2020	2019	2018	2017	
Barratt	12%	17%	14%	19%	18%	na	17%
Persimmon	na	28%	28%	30%	31%	28%	29%
Bellway	na	22%	21%	11%	15%	9%	16%
Taylor Wimpey	na	19%	11%	20%	22%	21%	19%

	2022	**2021**	**2020**	**2019**	**2018**	**2017**	**Average**
Barratt	12%	17%	14%	19%	18%	na	17%
Persimmon	na	28%	28%	30%	31%	28%	29%
Bellway	na	22%	21%	11%	15%	9%	16%
Taylor Wimpey	na	19%	11%	20%	22%	21%	19%

Position of HMG /Treasury

Allocation of CAs	***24%***

Table 28. Basic statistics of CAs	**Single hectare**	**Overall**
Area - ha	0.240	123,326
Benchmark values at outset - £	6,120	3,144,823,200
Benchmark values on completion - £	1,826,400	938,513,904,000
Benchmark values over project[15] - £	916,260	470,829,363,600

Table 29. Secondary market for CAs - £bn		***Max after year***
Gross	594	*3*
Less retained by HMT	(143)	
Net	**452**	

Table 30. Taxation under current regime[16]		**SDLT**	**LDT**
Buy land	25,500		
Housing costs	4,082,000		
Selling price	4,566,000	68,775	19,360
All taxes	88,135		
Taxes/developers' revenues	1.9%		
Compare			
HMG receipts from CAs/developer's receipts from CAs	*36.9%*		

15. Assumes linear construction and appreciation.

16. As though a single metropolitan hectare but at full charges on all receipts.

Year	1	2	3	4	5	6	7	8	9	10	11	12	12	14	15	16	17	18	19	20
Release of agricultural land - hectares																				
Opening agricultural use for development	513,860	479,603	445,345	411,088	376,831	342,573	308,316	274,059	239,801	205,544	171,287	137,029	102,772	68,515	34,257	0	0	0	0	0
Released for development	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	(34,257)	-	-	-	-	-
Closing agricultural use	479,603	445,345	411,088	376,831	342,573	308,316	274,059	239,801	205,544	171,287	137,029	102,772	68,515	34,257	0	0	0	0	0	0
Application of land - hectares																				
Brought forward	-	34,257	68,515	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	77,079	51,386	25,693	25,693
Entering development	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	34,257	-	-	-	-	-
Completed as housing	-	-	-	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	(25,693)	-	-
Completed for infCAstructure etc	-	-	-	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	(8,564)	-	-	-	-	-
Closing development	34,257	68,515	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	102,772	77,079	51,386	25,693	25,693	25,693
Cum realised as sold for housing - hectares	25,693	51,386	77,079	102,772	128,465	154,158	179,851	205,544	231,237	256,930	282,623	308,316	334,009	359,702	385,395	-	-	-	-	-
Houses built per year	-	-	-	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	256,930	-	-
Cum houses built	-	-	-	256,930	513,860	770,790	1,027,720	1,284,650	1,541,580	1,798,510	2,055,440	2,312,370	2,569,300	2,826,230	3,083,160	3,340,090	3,597,020	3,853,950	3,853,950	3,853,950
Issue and allocation of CAs (denominated in underlying hectares)																				
Opening	-	26,036	52,071	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	52,071	26,036	-	-
Issued to																				
Landowners	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	-	-	-	-	-
Development consortia	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	22,267	-	-	-	-	-
Local authorities	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343	-	-	-	-	-
Existing homeowners etc	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	1,713	-	-	-	-	-
All issued	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	26,036	-	-	-	-	-
Redeemed	-	-	-	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	(26,036)	-	-
Closing	26,036	52,071	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	78,107	52,071	26,036	-	-	-
Value of CAs in issue - £bn	198	396	594	594	594	594	594	594	594	594	594	594	594	594	594	396	198	-	-	-
Max value of CAs in issue - £bn	594.4																			
Year	3																			
Retained in HM Treasury, vol, - underlying ha	8,221.8	16,443.5	24,665.3	32,887.0	41,108.8	49,330.6	57,552.3	65,774.1	73,995.8	82,217.6	90,439.4	98,661.1	106,882.9	115,104.6	123,326.4	123,326.4	123,326.4	123,326.4	123,326.4	123,326.4
Retained in HM Treasury, val at closing levels - £bn	62.6	125.1	187.7	250.3	312.8	375.4	438.0	500.5	563.1	625.7	688.2	750.8	813.4	875.9	938.5	938.5	938.5	938.5	938.5	938.5
Max value of CAs with HMT - £bn	938.5																			
Year	15																			