

PLACEMAKING *NOT* PLOTTING

Towards a New Generation of Sustainable Suburbs



Contents

- 4 About the Authors
- 4 Endorsements
- 6 Executive Summary
- 8 About this Report
- 10 Planning Context
- 11 Placemaking not Plotting
- 14 Planning for a New Generation of Sustainable Suburbs
- 15 Scenarios and Recommendations
- 22 A Greenfield Development Design Code template
- 28 Conclusion
- 30 Authors’ background and previous work
- 32 Select list of published design guidance
- 33 Credits
- 34 Image credits

Front Cover: Cane Hill, Coulsdon
Developer – Barratt Homes
Architect – HTA Design

A speculative housing development on the site of a disused hospital in the green belt. Built footprint is minimised through the use of three storey house-types and cars are parked between houses in a tandem arrangement.

Fig. 1 Springstead Village, Cambridge
Developers – Bellway Latimer Cherry Hinton LLP
Architect – Pollard Thomas Edwards

Simple house-types, varied facing materials in an ordered layout with rich planting.



About the Authors

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Lots of housing, planning and design experts are pressing their advice on government. Why do we need yet another report?

The authors of this report are unusual in combining four decades of hands-on experience in the design and delivery of all kinds of homes throughout England with 20 years of research and publication on related issues (see page 30). Furthermore, we include a recent past President of the RIBA, the former Head of Architecture at the Ministry of Housing Communities and Local Government (MHCLG), and the chair of several local authority design panels, which review numerous current housing schemes. We therefore have a broad and detailed understanding of what makes successful places and why so much of today’s housing development falls short.

We also support and engage with others, including selected housebuilders and experts on the development management process, landscape design, design for movement, biodiversity and green infrastructure, to contribute suggestions for masterplanning and design code requirements to deliver quality through the planning system. We are grateful for the contributions of others to this report.

Endorsements

“In 2020 A Housing Design Audit for England revealed the generally sorry state of much new housing development across England, the sorriest of all being too many suburban extensions eating into the countryside with no recognition of their arcadian potential or sense of sustainable community building. We can and must do better. The recommendations in this report are a good place to start.”

Professor Matthew Carmona
Planning and Urban Design,
Bartlett School of Planning, UCL

“Solving the housing crisis is not just about building new homes and ticking a numbers box; it is about building well-designed, quality new homes that contribute to the creation of new communities that people are proud to live in and provide resilient places that will help us meet the challenges of the future, especially in relation to health and climate change. Proposed new developments should be good enough to approve, not bad enough to refuse but councils so often do not have the expertise or the right tools to ensure this. The recommendations in the report would not only provide councils with the right support to make their decision-making easier but would also provide more confidence to applicants by providing templates and a ‘critical friend’ system which results in a quicker and clearer decision-making process.”

Catriona Riddell
Strategic Planning Advisor, CRA

“The importance of well designed places that improve our quality of life cannot be underestimated. As an industry we need to be taking proactive steps to make this happen. This well considered report from industry leaders, with clear and practical recommendations is a positive addition to this goal.”

Professor Sadie Morgan OBE
Founding Director at dRMM Architects
Founder of Quality of Life Foundation

“This is a welcomed and much needed report by experienced and knowledgeable architects. It proposes sensible practical and specific recommendations to improve design quality. At this stage it seems unlikely that the ambition to build 1.5m homes will include New Towns of the scale of Milton Keynes but rather by adding to existing communities. These recommendations therefore seek to ensure that additions are integrated into existing neighbourhoods so that both urban design and architecture are of high quality. This involves embedding standards for good design throughout the planning process and compliance with core quality standards leading to speedier permissions. The emphasis on site specific urban design and architecture is particularly welcome. The case studies demonstrate how great results can be achieved and the recommendations should lead to this being possible more often - to leave a lasting legacy of high quality homes.”

Chris Williamson
President, RIBA
Founder, Weston Williamson + Partners

“Placemaking not Plotting’ is a really timely and very usable report to Government, identifying six issues each matched with a simple recommendation. Housing layouts are fixed for at least 100 years and we must anticipate the changing climate through good urban design. We tend to focus on the many excellent schemes across the country but these recommendations could raise the quality of all schemes.”

Robin Nicholson
Fellow, Cullinan Studio
Convenor of the Edge Thinktank

“We have to build housing in places that have access to jobs, transport, communities and high quality and accessible green space whilst enhancing biodiversity and reducing carbon. This is why an evidence based, data driven and design led approach is so important for weighing up options around the use greenfield sites for housing. This report sets out a series of important steps in this direction. I particularly commend the use of real world ‘Scenarios’ which explain why so much of the new housing on the edges of our towns and cities are so reviled by local communities. Let’s build suburbs that enhance the environment for everyone, including nature and building wellbeing in the process. It can be done.”

Professor Flora Samuel
The Professor of Architecture (1970)
Cambridge University

“Good design is a core ambition of planning and is rooted in the 1908 hope to create “ the home healthy, the house beautiful, the town pleasant, the city dignified and the suburb salubrious” (John Burns) Practitioners and decision makers can source guidance and best practice to help deliver such outcomes and this report focusses on practical and process driven recommendations to assist in that aim.”

Steve Quartermain
Director at Quartermain Ltd
Consultant, Town and Legal
Past Chief Planner at MHCLG

Executive Summary

The government has set an ambitious target of 1.5 million new homes to be built in the life of this five-year parliament. It wishes the legacy of this programme to be well-designed, sustainable neighbourhoods meeting the needs of human wellbeing, whilst also enriching the natural environment.

However, there is widespread disquiet that the housebuilding industry may not have the ambition, and willingness to embrace change, required to deliver both the quality and the quantity of homes to which government aspires. This is especially the case with the lower density urban extensions, typically on greenfield sites, which will continue to provide a large proportion of new homes nationally.

National planning policy already asserts that poor quality design should not be allowed. In this report, four architects, specialising in housing and placemaking, go further. They explain how the current planning system can be adapted to set a threshold for good quality urban design, with a quid pro quo for compliant housebuilders that speeds up the planning system. The outcome would be better quality design leading to more efficient use of land and an increase in supply.

The Ministry of Housing Communities and Local Government has published excellent holistic guidance in the form of the National Design Guide (NDG) and The National Model Design Code (NMDC). These are currently under revision, demonstrating an ongoing commitment to achieving good design quality in the widest sense, including community engagement, sustainability, urban design, landscape and biodiversity.

However, whilst housebuilders can deliver good quality housing, some examples of which are illustrated in this report, the general quality of much housebuilding continues to be disappointing, failing to fully deliver the promise of environmental, social and economic sustainability. Such poor-quality speculative development has stimulated opposition to much needed housing development.

This report argues that small adjustments to the existing planning process would help to achieve a step-change in the delivery of more and better homes, delivering improved compliance with the revised NDG and NMDC. The facing page shows a summary of our recommendations.

Application of these recommendations will deliver more efficient use of land as well as a faster approvals process and higher standards of urban design. The outcome should be a new generation of street-based urbanism and a new model for sustainable suburban development – landscape-rich, biodiverse, properly composed, mixed use, accommodating the demand for cars, but not allowing them to dominate.

The document includes a Greenfield Development Design Code Template illustrating the recommended principles, and appendices covering the authors’ background and previous work with further reading.

Recommendation 1 Strengthen national urban design guidance and apply it to all greenfield housing developments for 50 homes or more

Government should set out templates incorporating core design standards for typical greenfield development typologies and give these greater weight through the NPPF, making it easy for local authorities and communities to apply the principles, metrics and standards at a local level.

Recommendation 2 Require compliance with core quality standards at the earliest practicable stage in the planning process

Applications for outline planning permission should either be supported by site-specific masterplans and design codes, complying with the national core design standards for greenfield sites, or be subject to conditions requiring these to be produced following the grant of outline permission and before the submission of detailed reserved matters.

Recommendation 3 Get the urban design right first

Design codes should be consulted on with communities and stakeholders and agreed as two stages: urban design and then building design. Consideration of architectural style should follow from good placemaking principles. An effective masterplan should provide a high-quality and locally distinctive framework at, or soon after, outline planning approval for subsequent building designs, regardless of style.

Recommendation 4 Create green streets not highways

All new housing developments must meet national standards set out in a new and revised edition of Manual for Streets - Edition 3, including a stronger focus on active travel, public transport and pedestrian priority. It should be a simple and concise summary of design, technical and maintenance requirements, in a similar format to the NMDC so it can be read alongside it.

Recommendation 5 Embed design review in the planning process

Require all planning authorities to use multidisciplinary expert panels for pre-application review, funded by applicants, of sites for 50 homes or more. Panels will help to assess how well schemes meet the NMDC core quality standards, as well as local design policies, and whether departures are justified.

Recommendation 6 Reward compliance with speedy approval

Planning applications which follow the process set out above, and successfully demonstrate compliance, should either be approved by planning officers under existing delegated authority or should be presented to elected planning committees with a narrower focus on any outstanding issues for debate and determination. Successful applications should also demonstrate early and effective consultation with local communities to establish democratic support for fundamental development principles and limit later debate to detailed design and implementation.

About this Report

The government is committed to reforming the planning system to boost delivery of new homes. While there is widespread support for ‘streamlining’ our slow and costly planning process, there are also legitimate concerns about the location and quality of new development if existing checks and standards are weakened. This report suggests practical ways to safeguard quality while also encouraging an increase in supply, so that future generations can say ‘not only did we build, but we built well’.

The National Planning Policy Framework (NPPF) already makes clear that creating high quality buildings and places is fundamental to what the planning and development process should achieve. It is backed by excellent supporting Planning Practice Guidance: The National Design Guide (2019), and the National Model Design Code (2021) and Guidance Notes for Design Codes. These illustrate how well-designed places - beautiful, healthy, greener, enduring and successful - can be achieved in practice.

To quote from the National Design Guide ‘*Well-designed places influence the quality of our experience as we spend time in them and move around them. We enjoy them, as occupants or users but also as passers-by and visitors. They can lift our spirits by making us feel at home, giving us a buzz of excitement or creating a sense of delight. They have been shown to affect our health and well-being, our feelings of safety, security, inclusion and belonging, and our sense of community cohesion. They function well, accommodating businesses, homes and a range of other uses and activities that support our everyday lives.*’

Despite this clear national planning policy for well-designed places, and strong supporting guidance, the design of much new volume housing remains

poor. Few local planning authorities have sufficiently strong local policies and processes to require effective change, most have suffered an erosion of skills and resources over time, and many housebuilders seem unwilling to improve their existing technocratic approach to design, based on plotting, not placemaking (see page 11).

This report addresses the challenge of how to improve design quality by giving national guidance more traction at the local level, while at the same time speeding up and simplifying the process, so that the industry can deliver better homes as well as more homes.

Many of the new homes will be built on previously developed urban and industrial land, but the additional costs and other obstacles to ‘brownfield’ development are well rehearsed. Furthermore, London and other cities have already experienced two decades of increasingly dense development on a dwindling supply of land, and serious questions are being raised about the sustainability of very dense development, as well as its affordability and suitability for people on low and average incomes (see for example *Superdensity the Sequel* and *What is the Future of High-Rise Housing?* referenced on page 30).

This report therefore focuses, not on city housing, but on the suburban and rural places which will accommodate the majority of the 1.5 million new homes targeted by government, including so-called ‘grey belt’ land to be identified for release from the green belt and the many fields on the edge of existing towns and villages, which are subject to existing and future housing development. Some of these sites are already, or will be, allocated for new homes in local plans, while others are promoted by landowners where they can show that local authorities lack an identified five-year land supply.

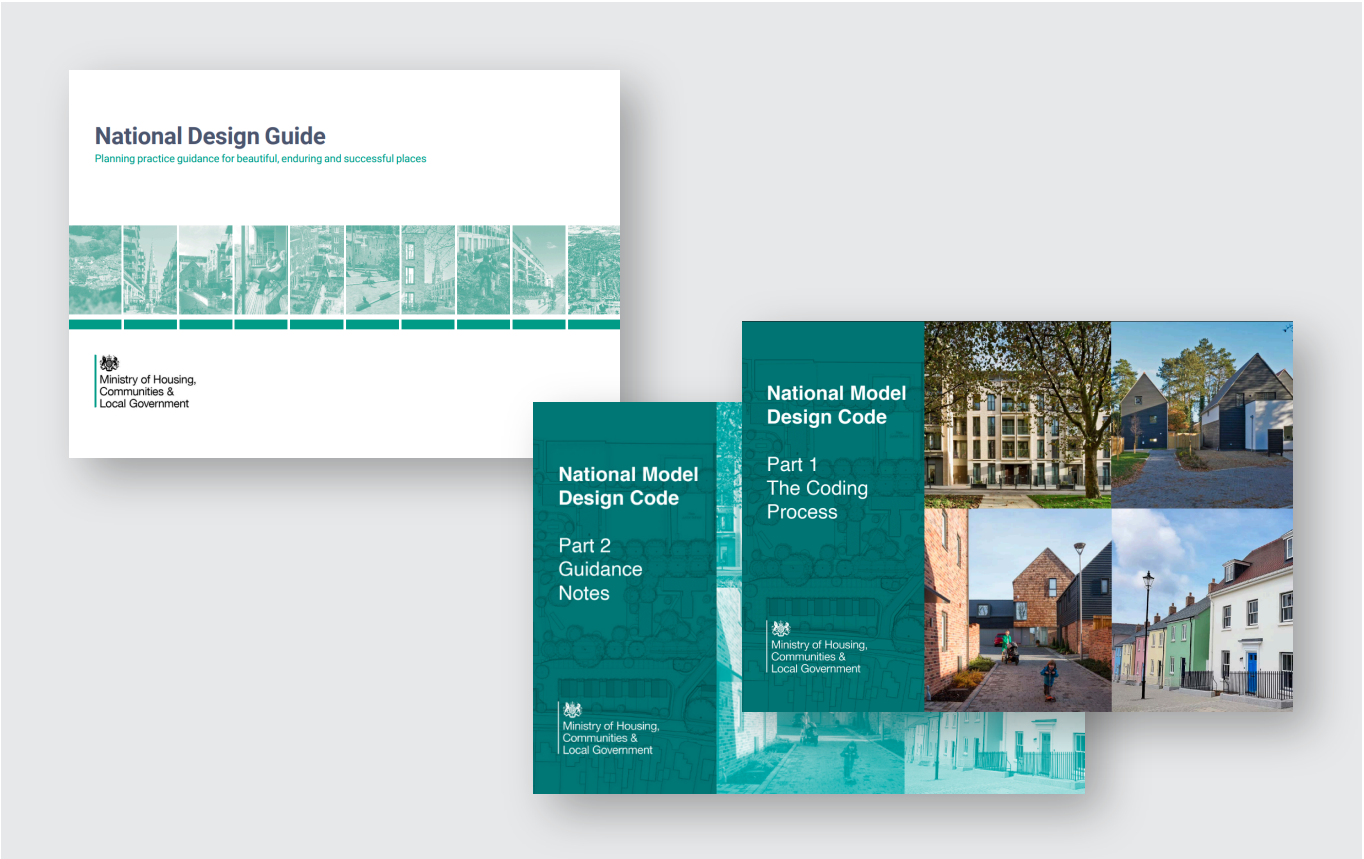
Our recommendations seek to transform generic edge of settlement housing estates into model suburbs for the 21st century. We identify some of the common weaknesses of current housebuilding and suggest ways to counter these with improved standards and processes. At the same time, our report illustrates successful projects by housebuilders demonstrating what can be achieved by the sector in the right circumstances.

Our aim is to provide developers and communities with more certainty on design standards in the national planning system that will lead to better consistency, greater efficiency, faster delivery and

better economic outcomes, whilst delivering more homes through efficient use of land.

The focus of this report is planning and urban design, including the landscaped public realm – captured by the phrase ‘good placemaking’. We acknowledge the equal importance of related issues and are aware of parallel initiatives by specialists in those fields, including environmental sustainability; ecology and biodiversity; construction and procurement.

Fig 2. National Design Guide and National Model Design Code (parts 1 and 2)



Planning Context

Today’s government is setting about reform of the planning system in a way which aims to be more effective and less disruptive than its predecessor. Moves to amend the National Planning Policy Framework (NPPF) and measures included in the Planning and Infrastructure Bill (PIB) provide an opportunity to strengthen and clarify design requirements. These will be contained within updated versions of the National Design Guide (NDG) and the National Model Design Code (NMDC). Therefore, this report does not contain an exhaustive list of specific design requirements, but it focuses instead on how to strengthen the application of existing and emerging national guidance.

It is not necessary to make radical changes to the current planning system to achieve improved quality outcomes. The tools exist: the National Design Guide and the National Model Design Code are instruments available to developers and local planning authorities to ensure quality is embedded in applications for new development. A fast track, accelerated or streamlined approach is possible within the constraints of the current system, including proposals outlined in the Planning and Infrastructure Bill. Effective change requires only small steps.

There is much debate about ‘streamlining’ the system and potentially reducing the role of elected planning committees and the communities they serve. We recommend that local plans should include a higher level of detail up-front for major allocated sites – effectively setting key parameters through design codes. Democratic legitimacy would be established much earlier in the process rather than at application stage, so that planning committees are tied to previously agreed decisions on fundamentals.

Whatever the outcome of proposed changes under the Planning and Infrastructure Bill, there is an urgent need for effective training for committee members and increase in the resources of planning departments. Clear, predictable and measurable design requirements would enable officers to sign-off significant components of planning applications and reduce the areas which remain properly subject to democratic debate and decision making.

Landowners and developers also need consistency between the requirements of various local authority stakeholders, including traffic engineers, urban design, landscape, ecology and sustainability officers. Required design and management implications in these areas should be agreed and clearly communicated to applicants early in the process. Clarity and consistency would enable developers to factor the consequent costs into their negotiations with landowners and mitigate the problem of overpayment for land squeezing out subsequent design quality.

Potential conflicts between internal local authority silos are identified by applicants as a major source of friction and delay in the planning system. The situation could be improved by gathering core design standards within the revised National Model Design Code as a template that can be adopted into Local Plans. Applications demonstrating compliance could then be processed speedily within the current system.

Placemaking not Plotting

When housebuilders use plotting rule books to determine housing layouts the guiding principle is to maximise the sales value of each individual plot according to characteristics thought to attract buyers.

Placemaking involves the design of the neighbourhood as a whole bringing together diverse aspects using composition to maximise wider benefits. Good design adds value through quality of place as well as individual homes.

The two schemes on the following page, both by speculative housebuilders, are compared to illustrate the different approaches. Both are represented in diagrammatic form to ensure anonymity.

Fig 3. Channels, Phases 3 and 5, Chelmsford

Developers – Chelmsford Land, Home Group, Hill Partnerships
Architect and Masterplanners – JTP

Compact, efficient masterplanning.



Plotting



Fig 4.

General comments:

This example is a typical product of the process of ‘plotting’ used by housebuilders. Plotting sets the rules for the positioning of standard house types on each individual plot and in relation to neighbours. Plotting rules vary amongst housebuilders, some generating more efficient layouts than others. The idea is to distance each home away from its neighbours and use disjointed geometries to accentuate detachment.

Cars and car parking:

The ratio of parking spaces to dwellings is similar to the scheme on the facing page. But in this scheme car parking is allowed to disrupt the layout and the environment appears car-dominated.

Urban design:

The apparently chaotic juxtaposition of houses makes no attempt to create any of the characteristics of good urban design – legibility, hierarchy, connectivity or spatial composition.

Street design:

Meandering curves and many cul-de-sacs create a confusing public realm. The multiple curves are intended to have a traffic calming role, though the restricted sight lines also create dangers. There is no separate provision for cyclists.

Front gardens and garden boundaries:

Lack of definition in street frontage leads to a failure in the distinction between public and private realm.

Place identity:

There is no attempt to create a distinctive character or identifiable heart to this scheme. Amongst its similar neighbours it contributes to a carpet of suburban anonymity.

Biodiversity Net Gain and Green Infrastructure:

There is no communal open space and therefore no possibility of creating a network of green infrastructure. The relatively small proportion of private gardens and complete absence of street trees represents a poor response to biodiversity net gain.

Private amenity:

Garden sizes are inconsistent and space is often awkwardly shaped. Only 25% of site area is allocated to private gardens compared with 31% for the placemaking layout on the opposite page.

Placemaking



Fig 5.

General comments:

The layout is part of a large urban extension with an overall masterplan to which the housebuilder is obliged to conform. The layout has been designed according to many of the principles recommended in this report. The outcome is more efficient use of land and better allocation of space in favour of public and private amenity, improved greening and less space allocated to vehicle movement and parking.

Cars and car parking:

Parking arrangements include unallocated street spaces, tandem parking between semi-detached homes and tightly organised parking courts hidden behind frontages.

Urban design:

The layout conforms to the principles of legibility, hierarchy, connectivity and spatial composition. The geometrically ordered plan is much more efficient and clear alignment of frontages allows coherent enclosure of space.

Street design:

There is a well-defined hierarchy of streets which take up a smaller proportion of land. Subtle variations of street alignments and widths add to a sense of character and aid orientation. Traffic is calmed using speed tables at junctions. Despite

inclusion of a generous separated cycle way, the design allocates no more space to vehicle movement and parking than the plotting example.

Front gardens and garden boundaries:

Consistent alignment of front gardens and boundaries uninterrupted by parking hard-standings offers the opportunity for a clear distinction between public realm and private space fronting homes.

Place identity:

A gentle crescent of semi detached homes around a significant open space provides a point of focus and the coherent character of the neighbourhood as a whole creates a sense of identity.

Biodiversity Net Gain and Green Infrastructure:

Wider roads in the hierarchy of streets are lined with street trees. A greater proportion of space given over to private gardens encourages biodiversity and well landscaped public realm creates links in the green infrastructure.

Private amenity:

Garden spaces are consistent throughout the scheme and are sensibly proportioned. The design allocates 25% more space to private gardens than the plotting layout on the opposite page.

Planning for a New Generation of Sustainable Suburbs

The authors of this report have engaged with MHCLG and other consultees to define a set of placemaking principles or core design standards for greenfield development, which have emerged from broad experience of design review of new low-density housing estates, from preparing and responding to design codes, and from dialogue with housebuilders. They aim to create a standard template through the National Model Design Code and National Design Guide which can be applied by local authorities and applicants to site-specific masterplans and design codes.

Planning, especially spatial planning, is the means by which society designs the built environment in the interests of human wellbeing. Appropriate decisions about land use are critical. The location and design of new housing should prioritise good connections to the surrounding area, active travel and integration of green and blue infrastructure. Housing layouts must be characterised by order, balancing repetition with diversity, with an easily navigable composition that clearly defines streets, squares and other public spaces. Landscape and the public realm must be designed to restore biodiversity, improve health and wellbeing as well as helping to address the climate challenge. Learning from the planning of the historic garden suburbs and garden cities, developers should avoid the winding and inefficient cul-de-sacs and random variety seen in many housing estates today.

We recognise that many houses will continue to be built around the edges of towns and villages at relatively low densities. However, the tired and familiar pattern of these estates, so often characterised by poor placemaking, very low densities, inadequate response to context and generic house types, must be transformed into new garden suburbs for the 21st century.

At the same time, we need to increase the density of development, especially on larger or better-connected sites, to achieve more efficient use of scarce land, increasing supply, meeting housing need and creating more sustainable environments.



Scenarios & Recommendations

The scenarios, described on following pages, depict some of the most common obstacles to housing quality that exist within UK delivery processes. The schemes are fictional but not hypothetical - they describe typical circumstances that repeatedly lead to poor outcomes time and time again. In each case we recommend an adjustment to the system that would vastly improve

the quality of new greenfield housing without detriment to viability, scale or speed.

Fig 6. Fossetts Farm, Prittwell, Southend-on-Sea

Developer – Thames Plaza
Architect – Levitt Bernstein

A transformative masterplan delivering 966 new homes, vibrant public spaces, and sustainable community infrastructure.

Scenario 1

Eldersgate Meadows

A national housebuilder submits a scheme for 180 homes. The layout is dominated by parking, the materials are low-quality, and there’s minimal landscaping. Planning officers object to the poor street hierarchy and lack of walking routes. But without enforceable design standards, they have no firm policy footing to reject the scheme. The development is approved on the basis that it “meets housing need” and “generally accords” with the NPPF. Residents soon complain about traffic dominance, lack of social spaces, and aesthetic blandness. It becomes a disconnected dormitory estate with little character or cohesion.

The Problem

The NDG and the NMDC guidance, supported by Chapter 12 of the NPPF, clearly explain how to deliver well-designed places. However, greenfield housing is generally based on standard housebuilder templates, which in many respects do not follow national urban design guidance and are characterised by ‘plotting not placemaking’. The same shortcomings can be observed on housing estates throughout the country.

Local planning authorities are expected to prepare policies, codes and guidance to interpret national design guidance locally. However, pressure on their budgets, leading to inadequate skills and resources, often results in little or no adopted design guidance. Local planners therefore have inadequate tools to promote good design and to resist formulaic housing estates.

Recommendation 1

Strengthen national urban design guidance and apply it to all greenfield housing developments for 50 homes or more

Government should set out templates incorporating core design standards for typical greenfield development typologies and give these greater weight through the NPPF, making it easy for local authorities to apply the principles, metrics and standards at a local level.

Stronger national design templates can be imported into local plans giving planners and applicants clarity and certainty around the required design quality. If developers want to propose innovative solutions which depart from the core design standards, they must demonstrate clear benefits through an independent design review and by reference to the published design principles listed on page 32.

Outcome

This will ensure that greenfield sites deliver sustainable, well-designed neighbourhoods rather than isolated and placeless housing estates. If a developer does not comply the local authority could insist on design revisions or refuse the application with confidence of success at appeal.

Scenario 2

Holloway Reach

A land promotor is granted outline planning permission for a large urban extension (600 homes) based on an aspirational vision, but vague parameters and with all design matters reserved except for access. The council feels pressured to approve due to national housing targets.

The site is eventually sold on to a housebuilder, and five years later, the Reserved Matters submission proposes a housing estate based on standard house types and an over-engineered approach to highways and infrastructure. The authority has no site-specific design code and is relying on a broad borough-wide design guide from 2016. The developer’s design is generic and poorly suited to local heritage, topography or community needs.

The council can't block it - the outline permission allows it. The final scheme diverges drastically from what was promised. The resulting housing feels out of place, fails to reinforce the character of the surrounding area, and leads to resistance to future applications nearby. Residents feel misled, and councillors express regret over the original approval.

The Problem

Many outline applications are approved with little or no design information, or with seductive visual impressions that are vague and non-binding, including conceptual illustrative layouts. Developers later submit Reserved Matters with entirely new layouts or downgraded features on the grounds of viability, leaving councils with limited ability to enforce better design. Furthermore, many applications are submitted by landowners and land promoters, with the intention of selling on the land to a housebuilder with outline planning permission. Difficult technical challenges, for example around the topography of sloping sites, are often obscured or ignored. The original applicant has no interest in the eventual outcome and the new developer has no buy-in to the original vision.

The previous government hoped to address this problem by requiring all councils to produce comprehensive area-wide design codes, but most lack the time, skills, or budget to do so. As a result, many places have no meaningful codes in place or produce generic ones that lack site relevance.

Recommendation 2

Require compliance with core quality standards at the earliest practicable stage in the planning process

Applications for outline planning permission should either be supported by site-specific masterplans and design codes, complying with the national core design standards for greenfield sites, or be subject to conditions requiring these to be produced following the grant of outline permission and before the submission of detailed reserved matters.

Site-specific masterplans and design codes should be based on the NMDC and prepared either by local planning authorities or developers. Developers of smaller sites may opt to apply for detailed planning permission, skipping the masterplan and design code stages required for outline applications.

Outcome

This will ensure that design responses are contextual, consistent, and clear, improving outcomes even where local planning capacity is limited.

Scenario 3

Hareford Gardens

The developer creates a style-focused code with rules about window patterns, rooflines, and brick colours. The scheme is praised at consultation for its “traditional look,” but the masterplan is highly conventional and fails to respond to its context. The built outcome is cluttered, car-dominated, and poorly connected, and the housing is clustered around cul-de-sacs with tarmac-dominated streets.

Residents complain it “*looked nice in the drawings, but it doesn’t really work.*”

The Problem

The NPPF requires local design policies to be ‘grounded in an understanding and evaluation of each area’s defining characteristics’, so that developments ‘are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change’. These are excellent objectives, but are often interpreted more narrowly than intended, so that locally distinctive design is reduced to architectural style rather than a holistic response to the particular features and context of a site.

It is common for developers to prepare a photo study of nearby local houses, ranging from distinguished historic buildings, through rural vernacular to generic post-war housing and recent estates, without any value judgement. A few of the more affordable materials and components are incorporated in the new development and presented as locally distinctive design. Sometimes these amount to decent neo-traditional homes, but often they are thinly disguised standard house types with minimal detailing and character.

Furthermore, the emphasis on architectural style can deflect attention from more fundamental aspects of urban design, including the way that houses are grouped and streets arranged to create enjoyable places which respond to their context.

Recommendation 3

Get the urban design right first

Design codes should be consulted on and agreed as two stages: urban design and then building design. The urban design section must cover the NMDC subject areas: overall masterplan; built form, density, building heights and footprint; public realm, amenity space and landscape design; street hierarchy and car parking arrangements; green and blue infrastructure. Consideration of architectural style should follow from good placemaking principles. An effective masterplan should provide a high-quality and locally distinctive framework for subsequent building designs, regardless of style.

Outcome

Focusing on urban design first will produce popular and well-functioning places, based on a sound framework, which can accommodate a plurality of architectural styles to suit the local context and market demand.

Scenario 4

Stonemoor Lane

The masterplan for a new area of housing includes tree planting and shared surfaces, but the highway authority demands 6m carriageways, turning heads, and parking courts. Roads are over-engineered and uniform, there is no clear hierarchy of streets, and planting is minimised to preserve sightlines and reduce maintenance costs. The street layout undermines social interaction and long-term sustainability.

The scheme is built, creating an isolated, car-dependent enclave with no local services and limited public transport. Residents must drive to reach essential services including employment, schools and shops - increasing emissions and traffic and marginalising those without the financial means for car ownership. Residents complain of speeding, a lack of shade, and unsafe cycling.

The Problem

In many developments, highways design trumps placemaking. Local highway authorities still rely on outdated, vehicle-first guidance, such as the Design Manual for Roads and Bridges (DMRB), despite the advice from Government for a vision led approach to highways design. Requirements are premised on vehicle priority, low cost, low maintenance, and easy access for large refuse vehicles. Greening of the public realm is minimised as a result. Developers and planners have little influence over design quality outcomes leading to poor quality, highway dominated spaces between buildings.

An alternative ‘streets not highways’ approach is set out in the Manual for Streets, widely used since 2007. However, while planners and developers can often agree on this approach, they are frequently stymied by the highway authority, when it comes to street adoption negotiations. Furthermore, Edition 3 of Manual for Streets has been in preparation for some years, blocked by difficulties reconciling these contrasting approaches.

Recommendation 4

Create green streets not highways

All new housing developments must meet national standards set out in a new and revised edition of Manual for Streets - Edition 3, including a stronger focus on active travel, public transport and pedestrian priority. This should be urgently completed and adopted with statutory weight. It should be a simple and concise summary of design, technical and maintenance requirements, in a similar format to the NMDC so it can be read alongside it.

Outcome

Planners and engineers will then be empowered to push back against car-first design, and developers will know the rules from the start. Streets will be leafy, safe, and sociable - designed for people, not just cars.

Scenario 5

Hilltop Rise

A major application is submitted with poor connectivity, block structure and green space design. The local authority lacks access to a design review panel and does not mandate review. Concerns raised late are dismissed as too costly to address.

The Problem

Design review, at an early pre-application stage, is recommended in the NPPF, but take up by local authorities is optional and patchy. Many authorities lack access to skilled panels or use review too late to influence design. There is no consistent national standard for how panels should operate, or what they assess. Developers can be resistant to the influence of design review and not all panels operate in accordance with best practice.

Meanwhile, well-run panels (over 60 regional design panels and 35 in London) are providing valuable support to planning authorities and applicants, and can demonstrate a track record of effective performance.

Recommendation 5

Embed design review in the planning process

Require all planning authorities to use multidisciplinary expert panels for pre-application review, funded by applicants, of sites for 50 homes or more. Panels will help to assess how well schemes meet the NMDC core quality standards, as well as local design policies, and whether departures are justified.

Existing guidance on effective design review should be combined into a national Code of Practice and recognised by MHCLG, which should also provide a concise model brief to help local authorities to appoint suitably capable and experienced panels (See links on page 32 to Design Review Principles and Practice by the Design Council (2019) and National Design Review Code of Conduct by Urban Design Learning).

Outcome

By helping to resolve design challenges before planning applications are submitted and decided, design review can provide more certainty to applicants and ultimately speed up the overall approval process. Panels give resource-stretched local authorities access to expert advice at minimal cost.

Scenario 6

Northbank Wharf

A developer invests in early engagement and follows the local design code. The scheme is well-received at design review but still takes 10 months to receive approval due to procedural delays and unfocused committee debate. The developer is frustrated, and future schemes revert to the bare minimum, reducing ambition system-wide.

The Problem

Good-quality schemes often face the same delays and scrutiny as poor ones. There is insufficient incentive for developers to follow best practice and every application becomes vulnerable to drawn-out negotiation or political debate, and may be in conflict with community aspirations.

Recommendation 6

Reward compliance with speedy approval

Planning applications which follow the process set out in our Recommendations 1-5 above and successfully demonstrate compliance, should either be approved by planning officers under existing delegated authority or should be presented to elected planning committees with a narrower focus on any outstanding issues for debate and determination. Successful applications should also demonstrate early and effective consultation with local communities to establish democratic support for fundamental development principles and limit later debate to detailed design and implementation.

Outcome

Developers will be incentivised to design well - not just submit quickly. Officers and members will be able focus resources on schemes that need intervention, while quality-led proposals flow more efficiently.

A Greenfield Development Design Code Template

This report focuses on the how the planning system can be modified to deliver better quality homes built on greenfield land (potentially including so-called grey-belt development) as part the government’s drive to deliver 1.5m homes by the end of the current parliament.

We have not placed design guidance in the main body of our recommendations partly because we are aware that the Ministry of Housing, Communities and Local Government (MHCLG) is already engaged in updating the current guidance enshrined in the National Design Guide (NDG), and the National Model Design Code (NMDC).

We have endorsed both the NDG and NMDC in their current form as being of high quality and relevant to the delivery of quality places to live. Together, they are appropriately holistic, covering the full spectrum of social, environmental and economic sustainability, the process of public engagement and design as well as urban design issues from the general to the particular. The problem lies not in the content of these guides, but in the very modest impact they have had on built outcomes generally.

At the date of publication we do not know how MHCLG intends to modify this essential guidance. We understand that the general thrust of policy-making is to reduce the burden of bureaucratic process on industry with a view to increasing efficiency and delivering economic growth. However, it is central to our understanding that good design adds value (not cost). In this section we describe those aspects of design which we believe are essential for success in the quest for quality housing delivered in the form of rural and suburban infill development, urban extensions and new settlements and typically on former agricultural land.

The following are recommendations for core design standards to include in a National Design Code template that local planning authorities can use for greenfield and grey belt development:

Space standards and environmental performance

To justify further planned encroachment on the Green Belt and other greenfield land, there should be a quid pro quo in terms of minimum standards for the design of individual homes. New greenfield homes should meet or exceed the Nationally Described Space Standard (NDSS) and achieve Passivhaus or equivalent high standards for environmental sustainability and comfort.

Density

It will be critical to demonstrate efficiency in the development of greenfield land, and especially on former Green Belt sites. Whereas policies for housing development in or adjacent to open countryside have hitherto been focused on openness and minimising visual impact, the densities necessary to deliver significant supply will necessarily be higher. Higher densities, by enabling a degree of self-containment of local facilities and employment, can also reduce average travel distances overall.

We recommend that developments of 50 homes or more should achieve a minimum net residential density of at least 30 homes per hectare. Developments over 500 dwellings should achieve an average of 40 homes per hectare with a wider range of densities between 30 and 70 homes per hectare, avoiding a carpet of uniformity. The current NMDC demonstrates a range of area types including urban neighbourhoods, local centres, suburbs and outer suburbs, all of which have a place delivering variety in the composition of characterful neighbourhoods.



Fig 7. The Gables, Crosby.

Developer – FP Homes
Architect – DK-Architects

A highly ordered geometry, simple built form with parking tucked between houses.



Fig 8. Icknield Port Loop, Birmingham

Developers – Urban Splash, Places for People
Architect – Howells

Ordered perimeter blocks create ample space for safe play and biodiversity.



Fig 9. Marleigh, Cambridge

Developers – Hill Partnerships, Marshall Group
Architect – Pollard Thomas Edwards

Corner windows and angled facades enable eyes on the street and passive supervision.



Fig 10. Mulberry Park, Combe Down, Bath

Developer – Curo
Architect – HTA Design

Street trees, enhance a grand boulevard of semi-detached homes.



Fig 11. Ashmere Garden Village, Dartford, Kent

Developer – Countryside Homes
Architect and Masterplanners – PRP

Research indicates resident satisfaction with very high levels of biodiversity net gain and environmental sustainability.

Cars and car parking

A key challenge is how to manage car dependence and car parking. Up to 40% of the land area of conventional housing estates is taken up by highways and parking: this wastes land, reduces the achievable number of homes and often creates harsh car-dominated environments. Car parking ratios (the average number of parking spaces expressed as a proportion of dwelling numbers) for greenfield housing can be upwards of two to one, and some local planning authorities, concerned to avoid informal parking on verges or pavements, call for ratios as high as three to one.

Demographic, economic and generational change (including working from home and internet shopping), changes in technology, increased take-up of micro-transport (electric cycles, scooters and micro-cars), and evolution of alternatives (including car clubs and ride-on-demand) will gradually change reliance on private car ownership.

However, for the time being residents of greenfield development will continue to need and expect some car parking. The amount will be assessed at the local and site-specific level.

At an average of 40 dwellings per hectare, current ratios can generate a requirement for very large numbers of parking spaces. Add to this the preference amongst housebuilders for providing parking spaces within individual plot boundaries, and housing layouts can become dispersed and inefficient. Design expertise is essential to overcome this problem, preventing domination of the environment by parked cars.

Parking arrangements should follow a hierarchy of preference: unallocated on-street parking parallel to the kerb (preferred); on-plot parking behind the main building line in the gaps between semi-detached and detached homes; tandem parking (one behind the other) where homes have more than one on-plot space; grouped in landscaped public squares; grouped in private landscaped courtyards. On-plot front garden parking in front of the house is best avoided, except where wide frontages enable at least 50% of the front garden to be reserved for planting.

Urban Design

Housing layouts must be characterised by order, balancing repetition with diversity (for example, at least four similar dwellings in a row), and an easily navigable composition that clearly defines streets, squares and other public spaces. Streets are more clearly defined by consistent built frontages that follow the same building line, avoiding random gaps and setbacks, which weaken the sense of enclosure.

Gaps between adjoining detached or semi-detached houses or end-of-terrace homes forming a street frontage should be no less than 3.5m to facilitate parking to the side. Gaps inserted between homes solely to achieve a ‘detached house premium’ are environmentally wasteful and create a poor streetscape. Where gaps do occur, they must contribute to placemaking and serve practical purposes.

Most streets (other than shared surface mews streets less than 10m wide) are greatly enhanced by tree planting, preferably on both sides and at intervals of no more than 15m, enabling at least two cars to be parked in between. The revised NMDC should include a national standard for the spacing, design, installation and management of street trees to be applied universally.

Streets are better for being well overlooked by living accommodation, so called ‘active frontage’, and fenestration with views up and down streets such as bay or oriel windows are better at providing a sense of passive supervision which makes streets feel safer. Similarly, flank walls and gable ends should contain windows, unless this causes overlooking of neighbouring private rear gardens, and flank walls forming street corners should contain front doors.

Streets with housing aligned on both sides are much more efficient than the common pattern of new housing estates surrounded by single-sided access roads, which increase the overall amount and visual impact of highway land and should therefore be avoided. Exceptions can be made for non-adopted narrow one-sided shared access drives or single-sided streets fronting homes that define open space.

Neighbourhoods deserve a distinctive heart, providing a sense of identity. This can be open space, natural landscape, a neighbourhood centre or any discernible feature, supported by a meaningful narrative, historical or otherwise. The objective is to lift the nature of place above the level of a generic housing estate, enabling a sense of community cohesion.

Biodiversity Net Gain and Green Infrastructure

Current planning standards for the delivery of biodiversity net gain (BNG) and the creation of a well-connected green infrastructure (GI) are well understood and increasingly adopted. Local Planning Authorities must have robust borough-wide plans for the delivery of these aspects which are critical to halting catastrophic species decline. Provided that they do, we support the pooling of BNG across several sites to enable delivery of benefits despite limitations on some sites when it comes to achieving minimum standards.

The design should accommodate the natural characteristics of the site; geology, topography, hydrology, acknowledging and preserving where possible existing plant and animal life, heritage and ancient patterns of human movement.

The creation of masterplans and design codes should be preceded by a thorough SWOT analysis to determine the net developable area after space for high quality landscape is set aside. Generally, this can account for 40% of the total site area and should allow for integrated play, exercise, sustainable urban drainage as well as a rich biodiverse landscape.

Developments of 50 homes or more should provide shared and public outdoor areas for play, sport and general recreation equivalent to standards set out in guidance from Fields in Trust.

Front Gardens and Garden Boundaries

Front gardens should be at least 2.0m deep, except on narrow mews streets, and at least 50% of the area should be for planting and not for hardstanding.

The way boundaries divide public realm from private amenity space is a significant contributor to

quality of place. Garden boundaries to the public realm should be in the form of walls, railings or evergreen hedges and not timber fencing or low post and rail fences.

Another virtue of reasonably substantial boundary treatments is to permit technical and electrical kit (other than collective utility infrastructure installed under permitted development) to be concealed from the public realm. Refuse and cycle stores can likewise be concealed from the public realm. In detached and semi-detached houses, these should be set behind the building line. Terraced houses should preferably provide external access to the rear garden or, if this is not achievable, high-quality enclosures in front gardens should be integrated with boundary structures and planting.



Fig 12. Horsted Park, Kent

Developer – Countryside Properties
Architect – Proctor & Matthews

Characterful but contemporary homes create strong street frontages with unallocated on-street parking.



Fig 13. Poundbury, Dorchester

Developers – Duchy of Cornwall
Architect – Ben Pentreath

Traditional street design enabled by rear parking courts.

Conclusion

The aim of this report is to support the Government's quest for a step change in the quality of new development on greenfield sites on the edge of or near to existing settlements, by refining and adding to the existing design guidance and elevate it to a simple but effective template for use by local planning authorities and supported by communities. Application of core design requirements for greenfield development will deliver more efficient use of land, increasing housing supply, delivering higher standards of urban design and accelerating project timetables. The outcome should be a new generation of street-based urbanism in the suburbs we build in the mid-21st Century and a new model for sustainable suburban development mandated through the national planning system – landscape rich, biodiverse, properly composed, mixed use, accommodating the demand for cars, but not allowing them to dominate.

Fig 14. Derwenthorpe, York

Developer – Joseph Rowntree Housing Trust with Barratt Homes and David Wilson Homes
Architect – Studio Partington

Family friendly, energy efficient, low carbon housing creating a powerfully individual sense of place with traditional built form and contemporary detail.



Authors' background and previous work

Our relevant experience

This report is the product of collaboration between four architects specialising in the design and delivery of mixed-use neighbourhoods: Andrew Beharrell, Andy von Bradsky, Ben Derbyshire and Matthew Goulcher. We gratefully acknowledge contributions of others to the report.

The authors of this report have been at the forefront of housing debate, design and delivery for more than four decades:

- Andrew Beharrell is a former senior partner at Pollard Thomas Edwards where he now acts as a consultant. He also chairs several Design Review Panels.
- Andy von Bradsky was previously chairman of PRP Architects, has served as the Head of Architecture at the Ministry of Housing Communities and Local Government, and is now principal of von Bradsky Enterprises.
- Ben Derbyshire is non-exec Chair of HTA Design, is a Commissioner at Historic England and served as president of the Royal Institute of British Architects between 2017-19.
- Dr. Lucy Montague is a senior lecturer at Manchester School of Architecture and a former Special Advisor to the House of Lords Built Environment Select Committee.
- Matthew Goulcher is managing partner at Levitt Bernstein, leaders in the field of housing design standards and consultants to MHCLG.

We are therefore able to take a long view and to bring experience from the whole spectrum of housing by type, location and tenure. In practice we have worked from an interdisciplinary perspective including planning, landscape Architecture and other related disciplines, not just architecture.

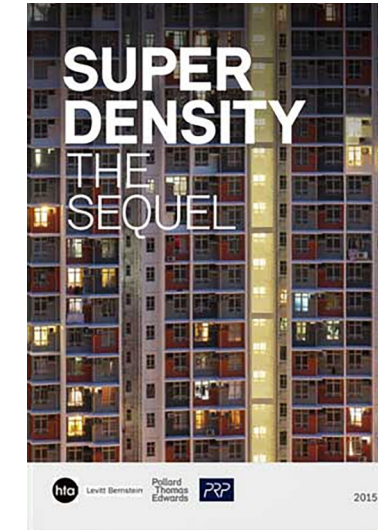
Why collaborate?

Whilst as practitioners we have variously competed with each other in the past, we have always recognised the benefits of collaboration, improving understanding and increasing our influence as a collective voice. The four practices with which we are associated are widely acknowledged as leaders in the field of housing design with a record of delivery for clients in all sectors including speculative development for sale. We have also collaborated, individually and collectively, on policy initiatives and research with other organisations such as Future of London, NHBC, RIBA, Design for Homes, New London Architecture, the Housing Forum. We have undertaken research for government, written numerous design guides and published many articles, papers and books about housing.

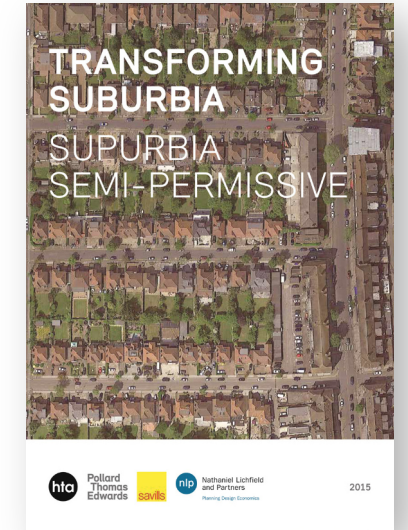
Fig 12. Previous collaborations (including *Recommendations for Living at Superdensity* (2007), *Superdensity: The Sequel* (2015), *Transforming Suburbia* (2015), *Altered Estates* (2016), *Distinctively Local* (2019), *Towards Net Zero – a collaborative approach to decarbonising housing* (2022), *Altered Estates II* (2022), *What is the Future of High-Rise Housing?* (2023), and *Build Homes, Build Jobs, Build Innovation* (2020).



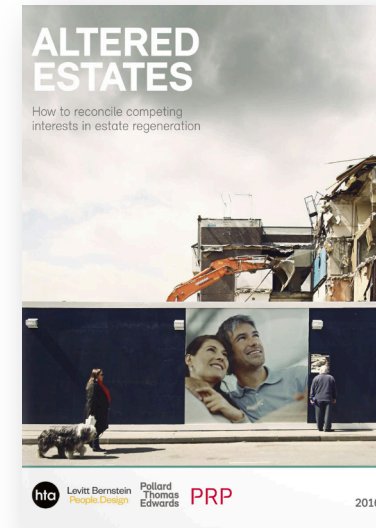
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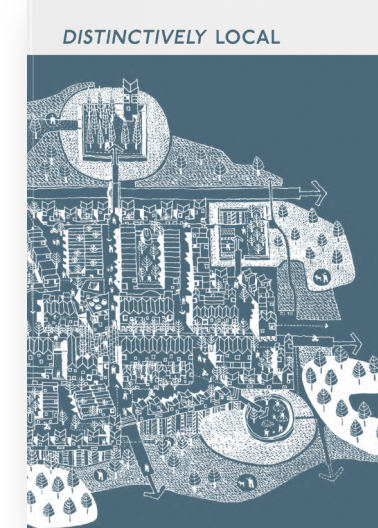
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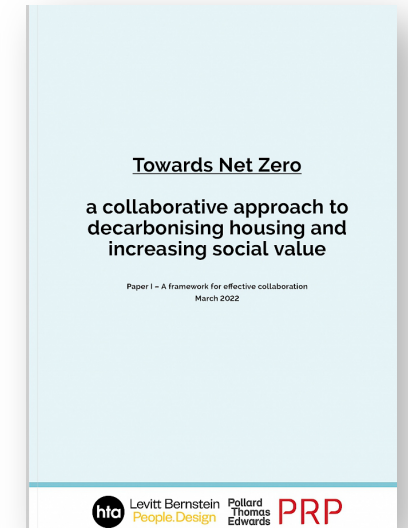
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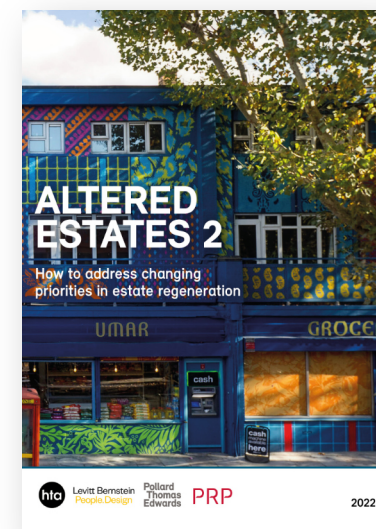
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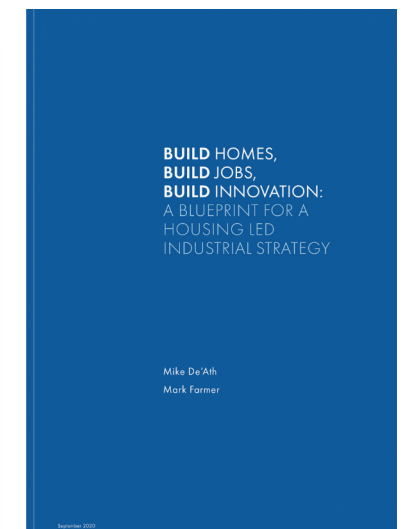
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Select list of published design guidance

Government policy & guidance

[National Planning Policy Framework](#) – Planning policy - see Chapter 12 Achieving Well Designed Places

[Design: Process and tools](#) – Government Planning Practice Guidance on design processes.

[National Design Guide](#) – Government guidance on design of built and natural environment.

[National Model Design Code, Parts 1 & 2](#) – Government guidance on developing design codes.

[Good Growth by Design](#) – An example of design principles and requirements by GLA.

Other guides

[Building for a Healthy Life](#) – Design for Homes, guide to best practice.

[Councillors Companion for Design in Planning](#) – Design Network, lay guide to good design principles.

[Ten Characteristics of Places where People want to Live](#) – RIBA, principles of popular places.

[Planning for Healthy Places](#) – Town and Country Planning Association. Guide to healthy places.

[Manual for Streets 2](#) – Government sponsored guide to street design.

[Distinctively Local](#) – HTA, LBA, PRP, PTE, guide to good placemaking and design.

[Place Value and the Ladder of Place Quality](#) – Place Alliance, assessment of design priorities

Other reports

[Housing Design Audit](#) - Place Alliance review of housing development 2019.

[Housing Communities: what people want](#) – The Kings Foundation.

[Foundations for the Future](#) – RIBA, a new delivery model for social housing

[Design Review Principles and Practice](#) – Design Council recommendations for design review

[Good Homes for All](#) – Architects Action 4 Affordable Housing / Architects Journal – examples of well designed housing

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Notes

Rear cover: Marleigh, Cambridge

Developer – Hill Partnerships, Marshall Group
Architect – Pollard Thomas Edwards

Semi detached houses frame a richly diverse bio-swale.

