Harmonious diversity
The power of choice

Greater choice for consumers helps create popular, inclusive and sustainable places. In this chapter we show how a wide spectrum of housing models can accommodate diversity and achieve a successful balance between individual self-expression and visual harmony.

Why we need choice

Increasing housing supply alone will not solve all the various 'housing crises' outlined in More, better, faster (page 8). We also need to diversify the housing on offer to buyers and renters. We need to create a more effective market, in which housebuilders compete for customers by offering a wider range and a higher quality.

At one end of the spectrum, self-build offers the most complete and immersive experience for people to create their own home. At the other end of the spectrum, being able to select from a wide range of characterful homes within a particular development can offer a much more rewarding experience than is currently offered on most new housing estates. In between, custom build has the potential to combine consumer choice with affordable large-scale production and produce a diverse townscape in the process. This spectrum of choice is demonstrated in our case studies.

The traditional housebuilding model will continue to play a major role in housing delivery. But stronger and more diverse competition can encourage the major housebuilders to up their game. We know that some are keen to improve and differentiate their products in an increasingly competitive market. To make a real impact, we need to expand alternative typologies, products, designs and tenures and not confine them to small-scale exemplars and experiments.

Sir Oliver Letwin's review reached a similar conclusion within the narrow focus of increasing build-out rates on large sites:

> " If either the major house builders themselves, or others, were to offer much more housing of varying types, designs and tenures including a high proportion of affordable housing, and if more distinctive settings, landscapes and streetscapes were provided on the large sites, and if the resulting variety matched appropriately the differing desires and financial capacities of the people wanting to live in each particular area of high housing demand, then the overall absorption rates - and hence the overall build out rates - could be substantially accelerated."

Our contention is that greater diversity will also create more popular, inclusive and sustainable places, as well as help deliver the numbers the government is pledging.

As far back as the mid-1970s the architectural practices behind this report have been engaged in finding out what people want from their homes and neighbourhoods and helping to deliver it. We have always believed that 'consumer choice' should shape the homes on offer, not only to those who can afford to buy but also to those who depend on the rental sector.

For example, PTE's early primer for creating new and improved homes in established neighbourhoods included the instruction:

> " Embrace help from anyone who cares to offer it - including neighbours, special interest groups, the local council and possible future residents. And be sure to introduce yourselves to those who you are about to inconvenience. Your neighbours will provide a great deal of useful knowledge and will generally be willing to share it with you."

A colourful example of what became known as 'community architecture' is PTE's project for the Free Republic of Frestonia, a housing co-operative in Notting Hill, west London, which declared unilateral independence from the United Kingdom in 1977 and was a forerunner of contemporary populist political movements.

There is a perception today that (unlike the residents of Frestonia) tenants, buyers and neighbours alike all lack effective influence over local development. The truth is more complex, with some groups dominating debate and others lacking an effective voice. There is also huge demand for additional homes, and, for the first time in a generation, a government which seems to recognise the political benefit of delivering them - and the risk of failing to do so.

The drive to deliver housing numbers is also an opportunity to extend housing choice, and to create distinctive and popular places. The challenge is whether and how we can scale up these approaches to meet the government's ambitious housing targets. Some of our case studies are large developments offering lessons directly applicable to this challenge. Others are smaller projects, which nevertheless present ideas which can be scaled up. Some case studies focus on standardisation and feature off-site construction. Others appear to be bespoke, but are the product of rigorous design and construction processes, which can be adapted to larger projects.

Free Republic of Frestonia (completed 1987) – new homes in Notting Hill designed for and with a housing cooperative

The spectrum of choice and variety

Individual self-build

Many people dream of designing their own home, controlling its construction or even building it with their own hands. Television programmes such as Grand Designs feed this appetite and entertain us with the trials and tribulations of self-builders (personal, bureaucratic, technical and financial) which disrupt progress before the triumphant conclusion. Alas, very few people in the UK get to experience this enviable form of torture. A parliamentary briefing paper published in March 2017 said that self-build only accounted for between 7 and 10 per cent of housing completions, much lower than other European countries. Our land and property market make it very difficult for individuals to find and compete for small plots.

When a group of self-builders combine to realise their individual dreams collectively, we can get places which are full of unrestrained variety and energy.

Endorsement of self-build in the newly revised NPPF and the Housing White Paper, which preceded it, coupled with the empowerment of local councils to initiate direct development, mean that self-build could provide homes for a wide range of people beyond the rich or the very determined. The chairman of the Local Government Association recently told *The Guardian* that he wants to "set forth a million builders". Lord Porter also has robustly libertarian views about design:

> " Let's let people design the thing they want to live in. Do we really care if our house is red brick, yellow brick, black tiles, yellow tiles? I don't care. The price for that is some people will build stuff we don't like, but if it meets building regulations, that's all we need to care about".

This exhortation to populist 'design riot' may not appeal to planners and architects, but we suggest below how to harness the energy of micro-developers within a framework of civility.

Directed self-build

When self-builders willingly submit to an overall design framework then the result can be a successful balance of diversity and uniformity, as we find in places which have evolved incrementally over several generations.

The new town of Almere Poort in the Netherlands includes 3,000 self-build plots. Promoted and subsidised by the local authority on public land, and originally conceived in a time of recession in conventional housebuilding, the neighbourhood is now 80 per cent built out.

Using the local authority's panel of architects, successful bidders designed their own houses on standardised plots within the masterplan and subject to practical rules around party walls. Self-build is usually associated with free-standing houses on larger plots, but this is a brave attempt to organise self-builders into creating a higher density collective urban place.

The biggest example of directed self-build in the UK to date is progressing in Oxfordshire. The Graven Hill site near Bicester is a development on former Ministry of Defence land by the local council, and with 1,900 homes is the UK's boldest experiment in self-build and custom build, enabling individuals to design inspiring homes on pre-prepared plots.

Findhorn, Forres, Scotland (1962 onwards) – self-build homes within a self-governing eco-village

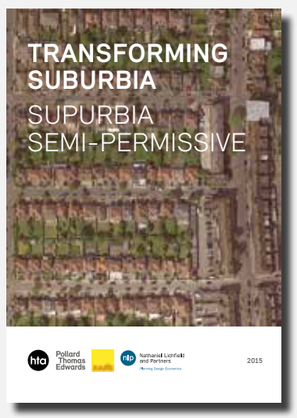
Almere, Netherlands (1976 onwards) – self-build homes at urban density and scale

Micro-development

The NPPF and The London Plan both emphasise the scope for smaller sites and smaller builders to contribute towards increasing housing supply. Recent research has explored the potential of the smallest development unit, one or two householders on single or paired plots. In *Transforming Suburbia* (2015) by HTA and Pollard Thomas Edwards with Savills and Lichfield, the architects put forward proposals to spark micro-development on a larger scale to take advantage of the very low densities in existing suburban neighbourhoods.

> " For all their virtues, the inter-war suburbs need to change - they are land-hungry, energy hungry and car-dependent - but local democracy and owner-occupation make large scale change almost impossible. How can we modernise the suburbs, increase the number and variety of homes and reduce car dependence - but maintain the space, greenery and independence that people value?
>
> This report shows how urban intensification of suburban London can increase housing supply, promote economic activity, improve local service provision and reduce congestion - whilst improving the quality of life, the choices available and the sustainability of the suburbs.

Their big idea is to turn the primary obstacle - lots of individual freeholders, who generally want to be left alone to enjoy their homes and gardens - into the primary delivery vehicle for change. Homeowners would be incentivised to become micro-developers.



Transforming Suburbia (published 2015) - turning homeowners into micro-developers

Focusing, as an example, on the 725,000 semis and detached house built in London's 1930s Metroland, the report shows how redeveloping a pair of semis can yield up to six good homes, without going higher than existing ridge lines, and can reinstate the greenery on streets degraded by car parking and the destruction of front gardens.

HTA's proposition is called Supurbia. It uses local development orders and neighbourhood planning to encourage communities to designate their streets for change. It is consensual and democratic. PTE's proposition is called Semi-Permissive. It uses an extension of permitted development rights to provide a fast-track through the planning system for development which meets a few simple rules. It is an unashamed appeal to the pockets of house-holders.

Both propositions tie into other relevant agendas:

- They create opportunities for small builders - and local architects.
- They lend themselves to pre-fabrication of modular typologies to suit the standardised plot sizes in existing suburbs.
- They encourage downsizing by older people and could provide participating homeowners with the means to fund their retirement and future care.
- They encourage a reduction in car dependence. Proposed sites are all close to public transport, and participants must commit to a reduction in parking.

In addition to boosting supply and regenerating the suburbs, these initiatives would stimulate organic change and encourage diversity through the individual choices made by householders, independently or in collaboration with their neighbours.

Semi-Permissive - creating sustainable suburbs through incremental change

Co-housing

Co-housing combines two laudable aspirations: the desire for individual control and the desire for community. Co-housing groups pool their resources to design and develop their own homes. They subscribe to a way of living which balances privacy and self-containment with shared space and common management. Typically, a co-housing development contains a group of self-contained homes plus a common house with shared facilities and shared gardens. Members (who may be tenants or owners) commit to a minimum level of communal activity (such as cooking and gardening) and to conditions which ensure that their home is passed on to a suitable future member.

Co-housing or co-operative housing is common in other places in Europe. For example, it accounts for 40,000 homes in Zurich, a city where 90 per cent of the 425,000 residents live in rented homes. It provides mainstream housing for people on ordinary incomes, typically paying around 80 per cent of market rates, with rents set to cover development, finance and management costs, but excluding development profit.

All members have a vote in decisions around management and future change. Some of the Zurich projects, such as 'More than Housing' at Hunziker Areal, also promote mixed-use, mixed-tenure and design diversity, employing several architects and including experimental typologies including large cluster homes for some of its 1,300 residents. There are 160 different apartment types, and the ground floor is given over to a wide variety of businesses and community facilities.

New Ground in Barnet (Case study page 78) is the UK's first senior co-housing development, designed and built for 26 members of OWCH (Older Women's CoHousing). Each member has her own unique apartment and they share a suite of common rooms and large garden. The design evolved through a series of workshops with the architect, in parallel with discussions about future governance.

The group values highly the mutual support and companionable ambience of New Ground, but are also actively engaged in the surrounding community: this is not a cloistered retreat. Their story highlights the difficulty of realising a co-housing project. This one took 20 years and eventually succeeded through the agency of housing association Hanover, which forward-funded and project-managed it. As one founder member says: "We are unique, but we don't want to be unique". Another co-housing project nearby at Woodside Square (Case study page 82) fell through because a pricing mechanism for their new homes could not be agreed at a time when house price inflation was rampant.

Co-housing has a significance and potential far beyond the small number of homes delivered in the UK to date. When New Ground was featured on television, the group received over 4,000 e-mails from applicants wanting to join. By definition, co-housing groups attract pro-active and community-minded people. Including a co-housing element within every large new housing development could help to 'seed' a sense of community and support the social aspect of place-making. It is not enough to build 1,000 homes and expect their new occupants to build a community: it requires positive management and governance, in which co-housing can play a valuable part.

'More than Housing', Zurich (completed 2015) – cooperatives as mainstream housing at scale

New Ground, Barnet (completed 2017) – cooperative housing as a model for later living

Cherrywood Close, Bow (completed 1997) – custom-build for tenants in estate regeneration programme

Custom build

Custom build provides homebuyers with extensive choice without the hassle of self-build, with the process managed by a developer. As one promoter on the HomeMade website puts it:

> " Choosing to custom build means that you get to decide on every aspect of your new home. But you won't need to get your hands dirty and you won't have the stress of managing the build yourself.''

Until recently, custom build in the UK has more often been available to tenants of estate regeneration schemes than to homebuyers. Back in the late 90s tenants of Tower Hamlets Housing Action Trust (HAT) were offered a choice of internal layout and external facade configuration for their new homes at Cherrywood Close in Bow, as well the more usual choices of finishes and fittings. The process helped build a strong sense of neighbourliness and pride in the place, which persists to this day.

At Heartlands near Redruth in Cornwall, 54 custom-built homes are being developed under the brand HomeMade, a partnership between housing association Places for People and specialist developer Igloo. It offers custom-built homes chosen from a menu of interchangeable house designs to fit standardised serviced plots within the masterplan. Frames are factory built, but the houses are clad and finished on site. Customers are provided with their own designer to guide them through the process and help them decide on internal and external finishes and fittings.

Beechwood West in Basildon (Case study page 80) pushes the custom-build concept further and increases the scale of provision. Over 250 new houses are under development in Basildon. These are completely modular factory-built homes, with only the infrastructure and final cladding constructed on site.

Swan NuLiving has invested in its own factory and workforce to construct the homes, and it intends to expand its programme to its other sites and potentially into fabrication for third-party developers. The technology is based on cross-laminated timber (CLT) construction, which produces an exceptionally solid and stable structure, a world-away from flimsy pre-fabs.

Beechwood West also uses digital technology and factory production to widen the range of options. Customers can assemble their own designs using the on-line configurator, which is deliberately modelled on the way people now choose cars and other products. There are over one million combinations of options, but, mercifully, fewer than one million decisions to make. Pricing is competitive in the local market and accessible to people on moderate incomes.

Digital modelling also enabled the masterplan architects to test numerous potential combinations of customer choices to ensure that they sit comfortably alongside one another. It also helps persuade the planning authority to streamline the process of approving each home, within the outline permission and pre-approved menu of designs.

Heartlands, Redruth, Cornwall (left) and Beechwood West, Basildon (right) – contemporary custom build houses for buyers on ordinary incomes

The disruptive power of choice – subversion and conformity

It is important to issue a health warning at this point. Unrestrained individual choice does not make or conserve great places.

Where there are weak cultural conventions and people make changes to assert their individuality, then a place can be damaged. North London's Metroland was satirised by Vivian Stanshall's 1964 song *My Pink Half of the Drainpipe ("I think I'll paint it blue"),* which celebrates humble acts of rebellion against convention. Sadly, many inter-war streets today have been seriously degraded by over-parking, destruction of front gardens, poor external alterations and conversion of family homes into houses in multiple occupation.

This also serves as a warning to designers that very strong uniform concepts, unless protected by planning or management regulations, can invite subversion from the legitimate desire of people to customise their homes: the human need to distinguish 'what is mine from what is yours' and express their choices through external display is strong. Look what has happened to the award-winning Netherfield development of 1,000 council houses in Milton Keynes (1972). This was a heroic reinvention of the classical terrace translated into a modern idiom, which relied for its effect on total control and uniformity. Its residents were not prepared to conform to the architects' vision, and have retro-fitted their homes with a riotous mix of cladding materials, doors and windows.

Popular self-expression, for better or worse, can be constrained by conservation area regulations, and sometimes by landowner or founder's covenants. For example, residents of Hampstead Garden Suburb submit themselves to control, not only by the local authority, but by the Hampstead Garden Suburb Trust. Unauthorised changes, such as satellite dishes and plastic windows, are punished by naming and shaming in the local press and by enforcement action.

This may be frustrating to those who failed to read the small print in their title deeds, but it has conserved one of the UK's most attractive, and valuable, suburbs, with a richness and 'designed variety' of original homes. Here self-expression is confined to sculpting the privet hedge or choosing a Farrow and Ball colour for the front door.

In the United States 'New Urbanism' has taken landowner covenants to a new level. Citizens of Celebration in Florida, 'the town you wished you had grown up in', willingly submit themselves to management control over the colour of their curtains and what can be displayed on the front porch. Ironically, a place which contains a great variety of homes (all in the approved white clapboard and picket fence style) is socially homogenous. Residents are self-selecting and need to buy into the rules and the marketing image.

Suburban idyll and how it can be damaged by neglect and poor alterations

Netherfield, Milton Keynes (1972) - grand vision subverted by the urge to customise

Making a success of designed variety

Developers can offer their buyers and tenants wider choice without committing to the relatively complex process of custom build. The opportunity to select from a wide range of characterful homes within a particular development can offer a much more rewarding experience than is generally offered on new housing estates. We call this 'designed choice'.

Discussion of choice inevitably leads to discussion of variety, and striking the right balance between architectural diversity and uniformity is one of the big challenges in contemporary placemaking.

New developments are criticised for being too 'uniform' or 'monotonous' and unfavourable comparisons are made with 'traditional' townscapes, where the accretions of age - the choices which successive individuals and generations make to adapt and improve their environment - add character and variety.

Where strong cultural and craft traditions guide the choices people make, this process of organic change has produced some of the most beautiful, popular and valuable places in Britain.

Designers and developers sometimes respond to this yearning by designing new places which look like old places. The most celebrated of these in the UK is Poundbury, which has been highly influential in encouraging housebuilders to deliver neo-traditional homes, and also in shaping local planning policy. The innovative lesson of Poundbury (which is lost on many of its imitators and became weakened in Poundbury's later phases) is not in its recreation of old styles of architecture, but in its urban design: intricate human-scale streets where car is subordinate to pedestrian.

How then can we achieve in new places a richness of experience equivalent to the old places we love? And how do we strike the balance in a new settlement of achieving a coherent and pleasing aesthetic while offering enough variety and choice?

It is interesting to contrast two recent developments in the same market town. A typical estate of around 160 houses deploys around 12 different house types, taken from the builder's catalogue. This is not bad housing, but it does feel like an exercise in fitting pre-conceived generic designs on to a utilitarian estate layout, rather than conceiving a place which grows out of its context.

Little effort is made, for example, to turn exposed flank walls into animated facades or to consider views through the gaps between houses. Generic typologies can be acceptable if they are outstanding or innovative - indeed we will see more standardisation as a result of factory production - but these are not.

By contrast, nearby development at The Avenue in Saffron Walden (Case study page 84) deploys 35 different designs, all created for this project, to deliver just 76 new homes. Taking account of further minor variations to suit particular plots, every home is different. The Avenue no doubt required more intensive design time and construction co-ordination than its competitor down the road, but the visual richness is actually achieved by a controlled process of combining and manipulating a limited palette of materials, details and components.

Woodside Square in Muswell Hill, north London (Case study page 82), for the same developer as The Avenue and the same housing association as New Ground, takes the idea of designed variety still further, with 117 different designs for 159 homes. Again, the new build homes take a more limited number of base types and adapt them to suit different contexts on this complex sloping site. Variety is boosted further by the inclusion of 14 apartments in converted heritage buildings.

Both The Avenue and Woodside Square achieve a wide social mix, integrating independent living for older people alongside family housing, as well as providing affordable homes, which are visually indistinguishable from their neighbours. Unusually, Woodside Square also mixes tenures within apartment blocks, with affordable renters sharing a core with affluent down-sizers.

Successful application of this design approach to larger projects requires a further step-change in the use of 'intelligent replication' to create visually rich and varied places by choreographing a limited set of smart elements and using a restrained materials palette.

Hampstead Garden Suburb (1906 onwards) – residents submit to strict control over alterations

Celebration, Florida (1996 onwards) – active management and community building maintain architectural variety and social conformity

Variety evolved over time, with a single harmonious building material

Poundbury, Dorset (1993 onwards) – accelerated history with human-scaled streets

Mind the gap – standard house types fail to address the spaces between buildings

Placemaking - special house types celebrate corners, views and routes

Collaborating design teams

One of the qualities which we enjoy in historic towns and villages is that they have evolved over time. With longevity comes much variety of style and appearance. The challenge for a new settlement is to create an equivalent diversity and richness over a relatively short development period, without this appearing contrived and artificial.

A common response is to divide large developments into different character areas, which are allocated to different developers and design teams. This can work well if the designers share a commitment to a clear overall vision and speak the same architectural language. Sometimes that vision is expressed through a formal design code, expressing the stylistic preferences of the client, as with the Duchy of Cornwall at Poundbury.

Sometimes 'harmonious diversity' is achieved through an informal creative dialogue between architects on adjoining sites, as at Eddington in North West Cambridge and Barton Park in Oxford, where Pollard Thomas Edwards and Alison Brooks Architects are collaborating to deliver adjoining plots for developer Hill, within the landowners' masterplans.

Conversely, where developers and designers try too hard to outdo their neighbours, there is a risk of visual anarchy, sometimes satirised as an 'architectural zoo'. Even places with excellent masterplans and individually award-winning design teams can fall into this trap.

Newhall, an urban extension to Harlow, is in many ways exemplary: a strong masterplan created for a 'legacy landowner', with successive plots delivered through design and development competitions and some excellent housing designs. Sadly, the whole amounts to less than the sum of its parts, with contrasting designs shouting for attention and resulting in a discordant street scene.

Legacy landowners

Some large developments in the UK are brought forward in partnership with the original landowners, who wish to retain an involvement both for commercial reasons and because they aspire to create a legacy. The Duchy of Cornwall at Poundbury is the most high-profile example.

At Wing in Cambridge (Case study page 70), a design principles guide was prepared to set out the landowner's aspirations for design quality to prospective development partners. The document is now used to measure the evolving detailed proposals against the vision. (This is separate from a design code prepared with the local authority as part of the planning process, which we address below.)

Newhall, Harlow (completed 2009 onwards) – innovative masterplan but little harmony among diverse architectural concepts

Barton Park, Oxford (top) and Eddington, Cambridge (completions 2018 onwards) – collaborating design teams working to shared design principles within clear masterplan

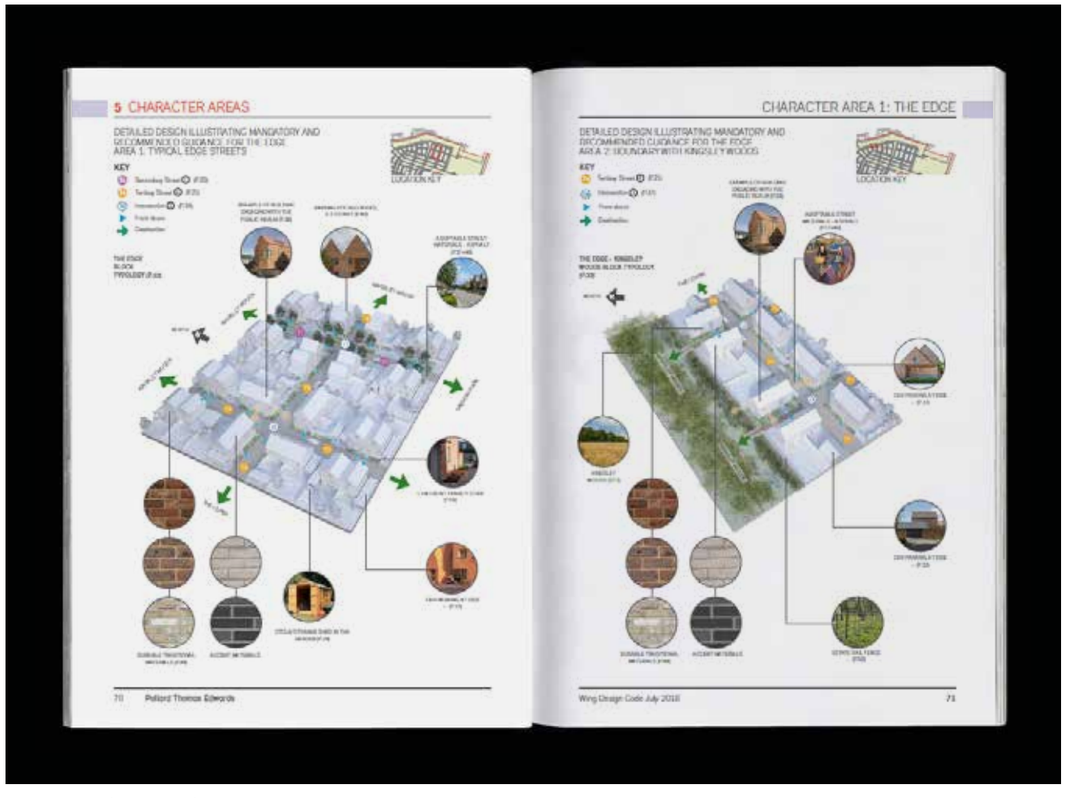
Design codes - a framework for variety or a straight-jacket for conformity?

Most town extensions and new settlements will be submitted as outline planning applications, with reserved matters applications being submitted later, possibly by different teams, over what could be several decades for larger projects. Design codes are often prepared for these larger projects to help integrate the efforts of different design and development teams working on different parts of the larger development - and they are increasingly required by local authorities before the consideration of reserved matters.

The expression design code means different things to different people. Codes range from high level design guidance around street types, building heights and typologies to detailed rules around appearance and material. The most detailed codes are effectively 'pattern books' determining the acceptable architectural style of a place and presenting a menu of acceptable designs: this approach has shaped some of the so-called New Urbanist developments in the United States.

Design codes can provide a quality benchmark, translating the over-arching vision into the delivery of its components, and ensuring the whole is greater than the sum of its parts. The best design codes achieve a good balance between prescription and flexibility. For example, they may set out quite detailed requirements for the design of streets and public realm - where uniformity will help to bind together a multi-phase development - while retaining flexibility for the architecture of the buildings.

Design codes cannot by themselves produce excellence - they are not a substitute for talented designers, but they can establish a common quality standard and promote 'harmonious diversity' - and at the very least they can help to prevent mediocrity.



Wing, Cambridge (2012 onwards) – Design Code as collaborative working tool with local authority

Wing, Cambridge – Design Principles Guide sets out landowner's expectations from development partners

Wing, Cambridge

Placemaking at scale: how to transform a new suburb into an urban village

Wing shows how some of the key benefits illustrated by our smaller case studies can be delivered on a larger scale. It demonstrates how we can create affordable modern homes which grow out of the local context, while giving customers a wide choice of homes through a traditional housebuilding process.

Wing will offer homebuyers an alternative to the generic housing estate: a wide range of modern homes, rooted in the Cambridge context, and a characterful place with a full range of facilities.

This 180-acre site, next to Cambridge Airport, will become a new eastern expansion to the city, providing 1,300 homes, a primary school, local shops, business start-up centre and a country park. The landowner is Cambridge's largest private sector employer, and there will be a synergy between the new village and Marshall's adjoining aviation, engineering and motor trade businesses: its workforce will enjoy the country park and sports facilities and will provide customers for the village centre.

Concluding remarks

There is huge demand for more and better homes, and, for the first time in a generation, a government which seems to recognise the political benefit of delivering them - and the risk of failing to do so.

The drive to deliver housing numbers is also an opportunity to revolutionise housing choice, and to create distinctive and popular places through the choices which people make. We can achieve great place-making and successful delivery by combining traditional housebuilding models with scaled-up non-traditional approaches, including co-housing and custom build. The design challenge is to balance harmony with diversity. The delivery challenge is to achieve variety and quality while also streamlining production at a time of skills shortages and rising costs. If we get this right, we will be rewarded with a richer housing mix and sustainable places that local communities embrace.

Recommendations for offering choice and diversity

- **Embrace diversity** - greater choice for consumers helps create popular, inclusive and sustainable places. Choice can arise from a wider range of pre-designed homes, and from programmes of custom build, self-build and micro-development.
- **Seed communities with specialist housing** - for example, integrating co-housing and downsizer homes into large developments helps to build that elusive sense of community.
- **Balance variety and uniformity** - beautiful places combine visual richness with calm uniformity. Great places emerge from a creative response to context and diversity in the range of homes, not from a scattering of random styles.
- **Design places which can mature over time and manage them accordingly** - the old places we love have evolved over generations of growth and change. Don't try to emulate that overnight.
- **Share a vision** - large developments benefit from a diversity of developers and design teams, working towards a shared vision and within an agreed framework, not striving for 'look-at-me' difference out of fear of sameness.
- **Use design codes with caution** - design codes can promote quality and deter mediocrity, but only committed developers and talented design teams will create excellence, and only then with the support of local people and their elected representatives.