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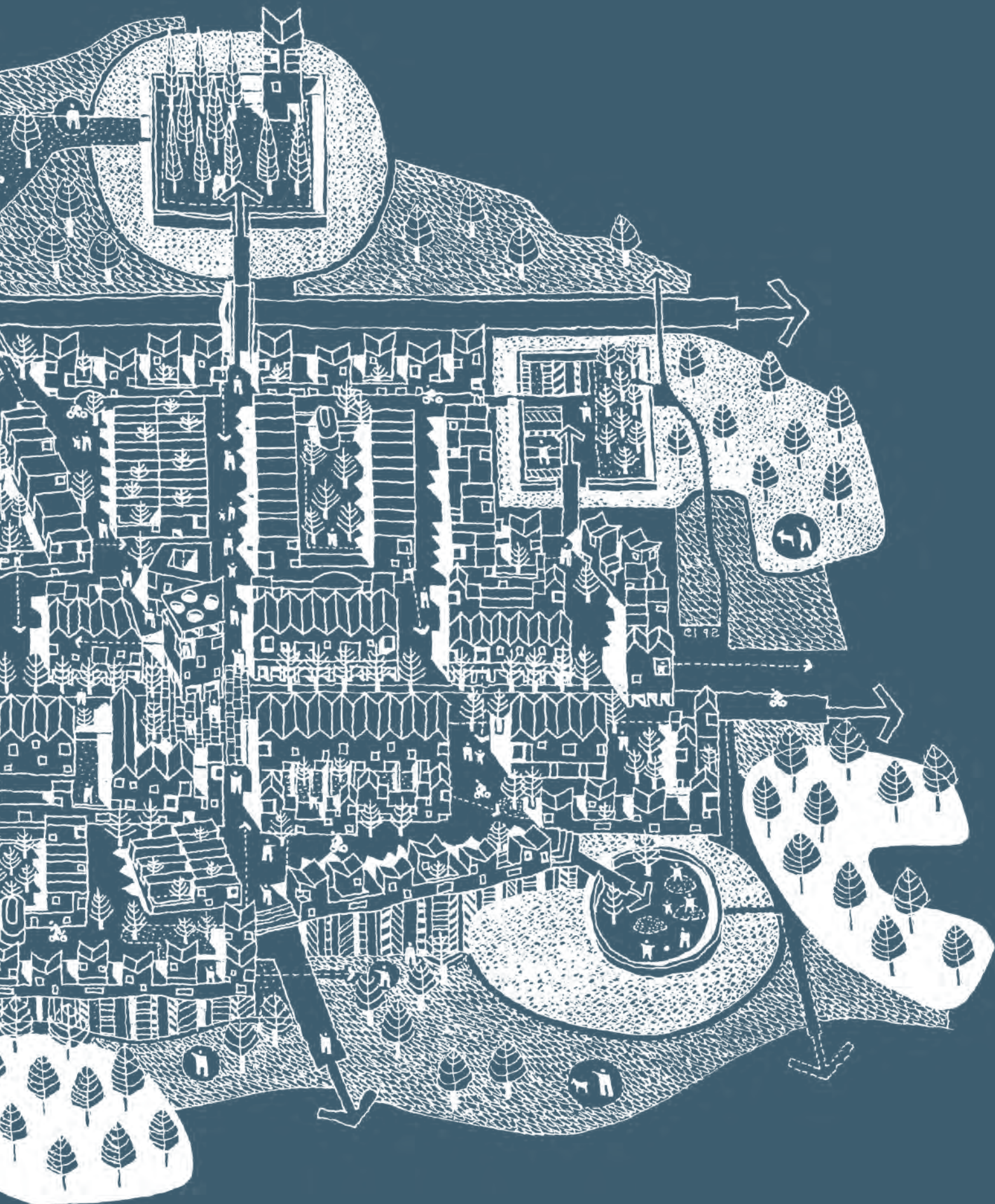
How to boost supply by creating beautiful and popular homes and places

FOREWORD
Lord Taylor of Goss Moor

This report was inspired by the Housing minister Kit Malthouse, who challenged architects to create great homes and communities.

If the great majority of what we build is poor quality 'anywhere estates' designed thoughtlessly (and I believe it is), we simply reinforce opposition to new homes being built at all. Yet every village, town, and city we love, every neighbourhood and community village we aspire to live in, was built by people for people. Why have we lost faith in our ability to do as well? Some of the very loveliest places evolved over time in tiny, hand-crafted evolutions that are hard to replicate today - but many equally successful places were created at scale, streets and terraces and avenues and even whole new communities from the 18th to the 20th century, using pattern books and master designs.

The UK has a great tradition of architects as visionary placemakers not just facade tweakers. To believe we can't deliver great places and wonderful homes is clearly wrong. As this report illustrates, the tradition of 'great homes and great placemaking' has not been lost. The challenge is to rediscover the belief in doing it right more often, and understand the thinking that goes into this - and fire the imagination and will to do more.

If the complaint is often heard that new homes are too often 'bland boxes', I am clear the answers won't come simply by rethinking the box, but also by looking outside the box - and I don't mean metaphorically. For me the most important single message of this report is that people live in communities and neighbourhoods and streets and landscapes, not simply in homes. So, architects and everyone else involved in delivering new homes need to start with the ambition to create great neighbourhoods and communities, full of identity and vibrancy. I hate it when policy makers ask us to deliver more homes - the challenge is delivering great communities, places where you and I can aspire to live.

And if you the reader take issue with something in this report, so much the better. Great placemaking comes not only from seeing how others have done things well, but by being inspired to do them even better. There is no one right answer. I urge you to read and think and debate this report - and then set yourself the challenge to do even better than the best you see here.

Matthew Taylor

INTRODUCTION

This report focuses on new suburban and rural housing, including urban extensions, suburban infill and completely new settlements. It aims to inform and inspire those who may be planning, designing, delivering or hoping to inhabit new developments, including the latest generation of garden towns and villages. It includes guidance and case studies showing how to create genuinely distinctive and popular places. In doing so we hope it will help foster a positive perception of new development that can in turn help smooth the path for boosting housing supply.

Our report is a positive response to housing minister Kit Malthouse's challenge to architects to help Britain achieve the government's ambitious housing targets by "building the homes the next generation deserves". Writing in the *Architects' Journal* in January 2019, he said: "If you get the design right - the scale, the context, the fitness - communities will feel enhanced and respected, and will lay down their petitions and placards."

Our report is also intended to support and complement Sir Oliver Letwin's *Independent Review of Build Out Rates* (October 2018) and the RIBA's response, published in the same month, *The Ten Primary Characteristics of Places Where People Want to Live.*

Unlike the RIBA document, this report does not aim to provide a comprehensive primer on placemaking. Rather, we concentrate on key aspects of design and aim to show in more detail 'what good looks like'. Our report begins with a chapter explaining the idea of local distinctiveness and why it is important in the context of boosting housing supply. In the following chapters we cover some of the essential themes to achieving this distinctive sense of place and quality. They are:

- Creating places which respond to their context
- Designing people-friendly streets and open spaces
- Crafting modern houses which feel like home
- Offering choice and diversity

Beyond the practical needs of comfort and convenience, people aspire to live in places which promote health, happiness and, that elusive concept, community. We also value a sense of place: that our neighbourhood, village, town or city has some special and positive characteristics that make it different from others.

The government certainly agrees. The rewritten National Planning Policy Framework (NPPF) published in July 2018 promotes community engagement as a means to understand the local context and instil new development with distinctive character. Every local plan and every urban design guide seem to feature the phrase 'local distinctiveness'.

In addition, in November 2018, the government launched the Building Better, Building Beautiful Commission. Its purpose is "to tackle the challenge of poor-quality design and build of homes and places across the country, and help ensure as we build for the future, we do so with popular consent." The authors of this report applaud the government's focus on quality, but caution that successful placemaking involves much more than stylistic preference. Our report contains case studies which show that successful responses to context can be more profound than architectural style alone.

Part of the ritual of achieving planning consent is demonstrating that proposals respond to the local context. Too often, this involves a formula of photographing a handful of the more characterful old buildings in the area and making superficial reference to them in a materials palette. Seductive imagery is used to steer bland proposals past the local planning committee.

These houses find buyers, not because they are well designed, but because they are well located and carefully priced in relation to the nearby second-hand stock. 'Local distinctiveness' is achieved, for example, by some timber cladding and a quaint fanlight. There is little joy.

So, how can we achieve genuine local distinctiveness? How can we create homes and places which tap into a more profound understanding of context and history, while also providing contemporary solutions which suit modern aspirations and lifestyles?

And how can we make great places, rooted in their context and offering choice to consumers, when there is growing pressure to adopt standardised production to double supply in a period of acute labour shortage and rising construction costs?

This report shows that it is possible to square these circles.

MORE, BETTER, FASTER
Local distinctiveness and the challenge to build more homes

How can we reconcile the push for increasing housing numbers with the aspiration for high quality and locally distinctive homes and places, especially against a background of skills shortages and rising construction costs? And how can we create places which are genuinely rooted in their context rather than making superficial gestures towards local styles?

Crisis which crisis?

Before we begin discussing the meaning of distinctive local design and why it is so important, it is worth considering this in the context of housing delivery more widely and the often-competing nature of different requirements.

Everyone is talking about the 'housing crisis'.

To some this means a crisis of homelessness, illustrated by rising numbers of rough sleepers and people in temporary accommodation.

To others it means a crisis of home ownership, illustrated by falling numbers of owner occupiers and the growing cohort of 'generation rent'. This especially worries those who believe that home-ownership is the bedrock of a stable and prosperous society.

Everyone agrees that there is a problem of affordability: that the price of homes to rent or buy is too high in relation to average incomes, and that there are not enough homes at suitably subsidised rents for those on low incomes. The media likes to blame greedy developers, parsimonious government and smug, older homeowners.

Most of our leaders agree that the way to remedy the situation is to build more homes, thereby redressing the balance between supply and demand. (Some dissenters think that a better solution is to reduce demand by closing our borders.)

For the first time in 40 years housing is near the top of the political agenda, regarded by all parties as a significant election issue. In 2015 government pledged to boost supply, building one million new homes from 2015 to 2020 and increasing annual completions to 300,000 by the mid-2020s. The newly revised National Planning Policy Framework (NPPF) published in July 2018 aims to promote new housing development and to increase housing densities on developable land, provided it is the right sort of thing in the right sort of place. In the November 2017 budget, the chancellor Philip Hammond pledged £15.3 billion of new financial support for housebuilding and land supply over the following five years – taking the total to £44 billion.

Housebuilders and large housing associations (which increasingly see themselves as housebuilders with a social purpose) are gearing up to deliver. They talk confidently about development programmes running into tens of thousands of homes.

But there is another looming crisis, the skills shortage in the construction industry: skilled people are retiring, and not enough young people are entering an industry perceived as old-fashioned; physical conditions on site are uncomfortable and the culture is seen as 'laddish'; productivity is poor; training and apprenticeship programmes have not recovered from the last recession. All of which was made plain in the 2016 *Farmer Review*

of the UK Construction Labour Model: Modernise or Die, which called for greater innovation and offsite manufacture to be adopted in housebuilding.

This systemic skills shortage has been masked by the UK's reliance on imported skills and labour from Europe. In London about 50 per cent of site workers (and 30 per cent of architects in the larger housing practices) are from the EU. We cannot grow indigenous capacity overnight; it will take a generation.

Another symptom of an industry in difficulty is the perception of poor quality and the reality of technical defects in new housing. The YouGov survey for the housing charity Shelter in 2017 found that 51 per cent of homeowners of recent new builds in England said they had experienced major problems including issues with construction, unfinished fittings and utilities.

Unsurprisingly, some would say there is a crisis of quality.

In addition, the construction skills shortage, coupled with the high cost of imported materials and components, is pushing up construction prices and extending delivery programmes. At the same time, house prices are stabilising or falling. As before, this decline in the development cycle is coinciding with increased planning obligations, as local authorities try to secure a bigger slice of development profits to fund affordable housing and other social or technical infrastructure. Just when nearly everyone agrees that we need more homes, it is becoming harder to achieve financial viability. Housing starts have begun to decline.

Back to the future
In response to this challenging situation many people in industry and government are turning to standardisation. It is hoped that having fewer but more rigorously tested solutions will deliver many benefits: less cost and more speed, fewer defects and less reliance on site skills.

Standardisation does not require factory production, but it does neatly dovetail with what is variously called offsite fabrication, modern methods of construction (MMC) and design for manufacture and assembly (DfMA). We have of course been here before: pre-fabricated houses and systems-built flats for the post-war baby boomers contributed to the last

great council housebuilding push, but the image and performance of much of the resulting stock discredited the concept of manufactured housing. Sir John Egan's 1998 Task Force Report *Rethinking Construction* came to some similar conclusions to the Farmer Review: the former chief executive of Jaguar thought that homes should be produced like motor cars. The government encouraged housing associations to promote MMC in their development programmes, but offsite fabrication never amounted to more than 7 per cent of their outputs, according to 2015 figures. Meanwhile many housebuilders favoured timber frame (a hybrid of site and factory construction), which has survived well-publicised technical issues and remains a significant part of their output.

Conditions today, and the potential severity of the various 'housing crises', mean that the time for DfMA may have finally arrived. Processes and products are greatly improved, there are many new entrants to the market, ranging from micro-specialists to behemoths like Legal and General. The housing ministry and the Greater London Authority are looking very carefully at its potential.

In Britain, MMC, and its parent pre-fabrication, have usually been seen as a top-down solution for affordable rented housing. Of course, this raises some questions and challenges; for example, how will homebuyers respond to the DfMA revolution? And for designers the task is to create locally distinctive places using a standardised kit of parts.

The need for choice
Amid all the excitement about housing supply targets, standardisation and design for manufacture, it would be all too easy to forget that we are building homes for people, not units for population cohorts.

Thankfully, there is a very different conversation going on: this focuses on people and community, and it converges in the concept of placemaking.

The NPPF is committed to "strong, vibrant and healthy communities" inhabiting "distinctive places" and the value of community engagement in harmonising new development with local aspirations and context. Places should be "sympathetic to local character and history, including the surrounding built environment and landscape setting".

This localism agenda introduces the final 'crisis' in our recital of today's housing dilemmas – a crisis of choice. There is a perception today that tenants, buyers and neighbours lack effective influence over local development. The truth is more complex, with some groups dominating debate and others lacking a voice. But it is surely the case that consumers of new homes have very little say in their design and very limited choice in the market place.

Public discourse voices people's frustration about lack of influence over our domestic environment, and it expresses a yearning for something more than generic products. Even well-intentioned initiatives to raise design quality (for example the London Housing Design Guide) can have the unintended effect of narrowing the range of what is on offer.

This report contains case studies which show how homebuyers can enjoy real influence over some very topical areas of demand, including co-housing for our ageing population and custom-build family houses.

What it means to be distinctively local
As we note in the introduction, the government has underlined its commitment to better design quality of new housing with the launch in November 2018 of the Building Better, Building Beautiful Commission. Its remit is to help ensure new developments meet community needs and expectations, making them more likely to be well-received rather than resisted.

The media has emphasised the anti-modern views of some commission members and speculated that it will simply equate beauty with neo-traditional styles of architecture. However, we note that the commission is consulting widely and we await its conclusions with interest and open minds. In particular, we are interested in how it will integrate its message with the pressure for volume and standardisation, which we discuss above. Our case studies may help to show the way: all combine contextual placemaking with an understanding of the customer and a rigorous approach to the 'means of production'. One of the most innovative, Beechwood in Basildon, is entirely manufactured in the factory and shipped to site for rapid erection. What's more, the concept provides occupiers with a huge degree of choice, as the homes are tailored to suit individual design requirements. (Case study, page 98)

Successful placemaking involves much more than stylistic preference. It begins with an effective masterplan containing the seeds of distinctive character and identity. At the outline stage there is no need to commit to any specific form of architectural

expression - indeed, to do so is sometimes a distraction from strategic plan making, and designers should tread carefully in this area. However, in order to illustrate the feel of a place, design teams often do get drawn early into the question of 'style', and present seductive illustrations to help sell the overall concept. It is therefore important to understand that character will grow out of a wide and complex range of inter-connected issues, including viability and process as well as visual preference. The character of buildings and places must balance many factors, including:

· Learning from the built and landscape context and taking clues from it, especially in those places where a distinctive local vernacular has evolved and survived.
· Connecting the past to the present: meeting the requirements and aspirations of today's residents for modern standards of comfort, convenience and flexibility.
· Modern construction techniques, achieving robust and enduring quality, while minimising cost, wastage and environmental impacts.
· The influence of phased development of large sites and the scope to create 'harmonious diversity' through a variety of development agencies and design teams.

What is the proper character for new development in the countryside? Take the example of new settlements on former military sites, such as Dunsfold Park, which will occupy a former WW2 airfield surrounded by woodland in the Surrey Hills. Rather than copy the low-density linear form of a traditional Surrey village, the masterplan creates a concentric walkable settlement with its centre set on the alignment of the runway, which will become a spectacular piece of 'land art'.

Vernacular traditions and modern lifestyles

Relating large new developments to the local urban design and architectural context is challenging. Rural planning authorities and their constituents tend to be stylistically more conservative than their urban counter-parts, so it's commonplace for developers and designers to make reference to the 'local vernacular' in order to soften opposition. But what does this actually mean and how can it respond to contemporary technology and lifestyles? How do we avoid so-called local vernacular references being no more than superficial additions to generic planning and house types?

Historically, vernacular architecture was the direct product of local building materials and techniques practised by craftsmen applying knowledge accumulated over generations. Vernacular architecture grew out of a particular set of circumstances in a particular place and time.

Regional differences in vernacular architecture struggled to survive the arrival of the railways, which enabled materials (such as Surrey bricks and Welsh slates) to be transported cheaply over long distances and used in contexts far from their original source. Nevertheless, distinctive craft skills and local materials remained available and affordable until the early 20th century. Today, hand-crafted solutions cost much more than modern construction approaches and are likely to be found only in bespoke homes at the upper end of the market.

In order to borrow and learn from the past, it is vital to identify the successful and appropriate elements of the local vernacular which could inspire and influence the design of new buildings and spaces.

The objective of the designer should be to adopt the spirit of the vernacular while introducing elements of innovation. This involves drawing on the characteristics of local buildings - their scale, use of materials, and relationship to the landscape - and at the same time responding to modern lifestyles and aspirations. Thatched cottages look pretty but are often cramped, dark and damp, while homebuyer surveys invariably feature space and light among people's highest priorities.

To create and sustain beautiful and popular homes and places requires a holistic understanding of the many aspirational and practical aspects of design, as well as long-term occupancy and management. 'Style' and 'character' will emerge from an integrated design process and from the way that places mature with use. The right architectural language for the particular brief and place, located on the spectrum of traditional to modern, will evolve, and need not be imposed at the start.

We expand on these considerations in greater detail in the following chapters.

Homebuyers like traditional materials enclosing spacious modern interiors with generous windows

Dunsfold Park

Placemaking at scale: how to create a new rural settlement

Dunsfold Park will be a new Surrey village for the 21st century. The former WW2 airfield has outline planning permission for 1800 homes, set within a 250-acre country park and focused on a market square with shops and schools. Unlike many new settlements, the residential village will be grafted on to an existing business park with potential for 2,000 jobs: a genuine working community and not a dormitory.

The vision for Dunsfold Park was formulated long before the current revival of the garden city movement, but closely mirrors the TCPA's garden city principles.

The layout is structured around the main runway, which will become a linear park and striking piece of 'land art', and the 5 km perimeter track. Everyone will live within 10 minutes' walk of the centre and two minutes from a bus-stop. This compactness challenges conventional travel assumptions: although Dunsfold Park will accommodate cars, it is not designed around conventional highway and parking models, and it anticipates future changes to car ownership, vehicle technologies and travel patterns.

The village centre will feature an intricate and human-scaled network of streets.

An active centre at the heart of the village

A parkland setting

A wide range of homes for all

A healthy place to live and work

A walkable place

Innovative technologies for energy and waste

Promoting jobs and homes - a live-work balance

Celebrating Dunsfold's aviation heritage

Encouraging sustainable travel

Beautiful modern homes inspired by their context

Distillation of place
Creating places which respond
to their context

Inspiration for connecting new developments to the local context can come from a variety of sources - vernacular building forms, local history, the grain of surrounding settlements, topography and geology. Designers should look beyond the copying of past styles towards a more profound celebration of context, interwoven with a response to community aspirations and practical needs.

What we mean by distillation of place

In his 1939 novel *Coming up for Air* George Orwell made an observation on typical suburban expansion, commenting "I don't mind towns growing so long as they grow and don't merely spread like gravy over a tablecloth."
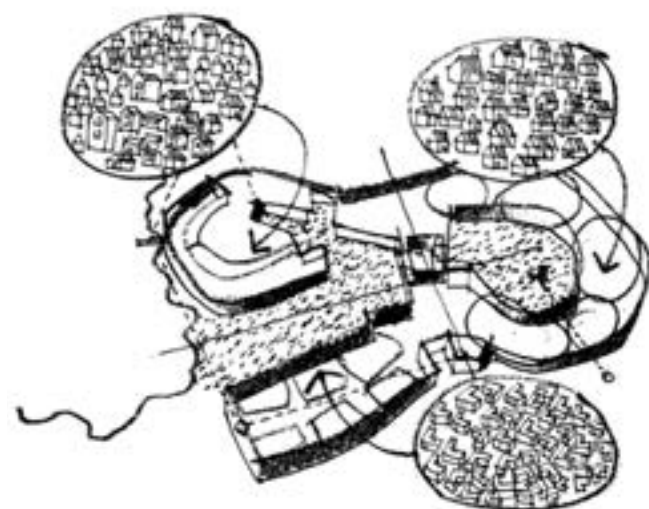
One of the biggest obstacles to the creation of new residential developments on the edge of existing towns and neighbourhoods is the invariable opposition they meet from local residents and stakeholders. Rather than inspiring new communities, locals see only anonymous suburban sprawl.

To garner support from the existing community, good neighbourhood design should begin with an analysis and understanding of the local physical, historical and cultural contexts as a way of exploring potential design narratives. This exercise in capturing a 'distillation of place' will help to deliver new neighbourhoods with a strong identity and sense of belonging.

Mere lip service is too often paid to the specifics of context, resulting in the superficial application of local materials and building elements. This might be a projecting bay, pitched roofs or decorated barge boards, retrieved from a cursory overview of the local vernacular and applied to a standard house plan - all in the anxious search for a sensitive and 'safe' response to local planning guidance.
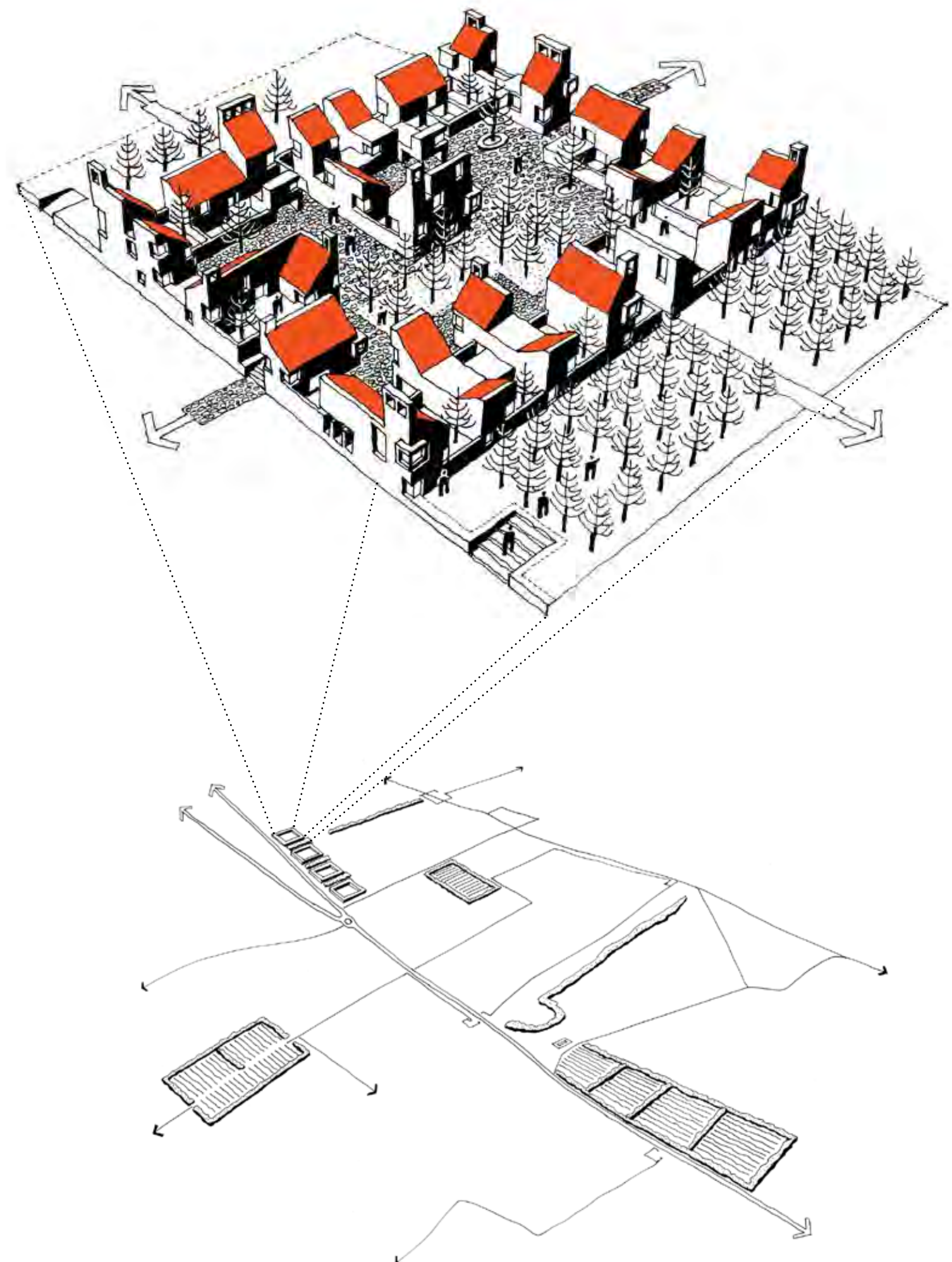
Unfortunately, this strategy delivers the same or similar generic outcomes across the country, resulting in spatially incoherent and disconnected suburban layouts of small 'executive homes' with little or no architectural variety.

New neighbourhood designs should exhibit the distinctive characteristics of locality in terms of scale, grain and a specific relationship of built form to landscape. All of these have historically contributed to the distinctiveness of place. As Gordon Cullen, the great exponent of townscape pondered in his 1974 design report for a new settlement in Maryculter to the south west of Aberdeen, "People live in houses, but where do the houses live? If they are homeless, then all we are left with is the typical endless, featureless suburbia".

Concept Sketch for Mayculter by Gordon Cullen 1974.
© Thomas Gordon Cullen Collection, Archives of the University of Westminster, courtesy of the Cullen family

Mountfield Park concept sketch residential cluster, orchards and shelterbelts

To reiterate, it is therefore important to initiate the design process with a thorough investigation of the immediate local physical context. It may start with an analysis of the existing topography, built fabric and landscape patterns (within or adjacent to the site) as a way to understand the nature and configuration of any strategic landscape and the way this informs any proposed site layout. For example, in a recent narrative study for Ebbsfleet Garden City an analysis of the topography of chalk cliffs and the distinctive nature of the local Thames Estuary typography formed the basis for a series of design guidance strategies for the creation of distinctive character areas within the post-industrial landscape.

Similarly, it is important to identify the potential for spatial connectivity to an existing neighbourhood's streets and parks through an understanding of existing movement patterns of pedestrians, cycles and vehicles. This will ensure that future neighbourhoods are not designed as isolated, introverted and disconnected estates, but are fully engaged and integrated with adjacent communities.
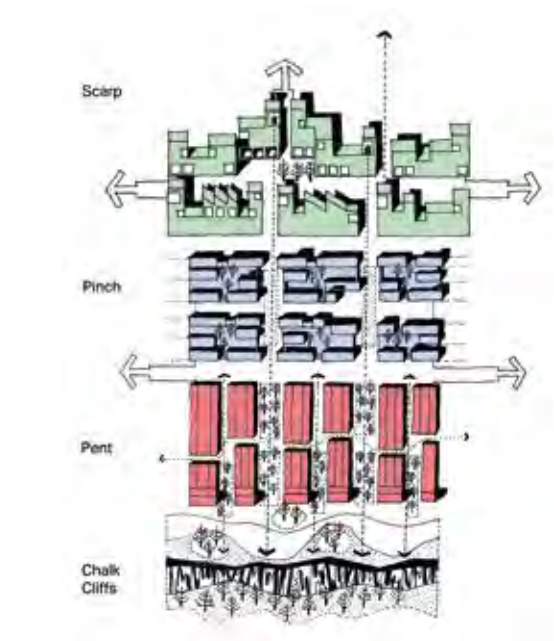
Respect boundaries

It is also important that the nature of an existing settlement's edges and boundaries is clearly understood. This is a key ingredient in the distillation of place, as it is often the precise configuration and celebration of edges and boundaries that form the defining characteristics of existing neighbourhoods. A good example is the distinctive grain of the 18th century New Town of Edinburgh juxtaposed against the medieval quarter of the Old Town. Here, the contrasting grain and texture of the urban quarter helps to define a strong boundary and celebrate the distinctive qualities of each section of the city.

In contemporary housing, the edge of the new neighbourhood at Abode in Great Kneighton, Cambridge is defined by a strong profile of house gables and connecting garden walls at the plantation edge.

Figure ground of Ebbsfleet and surrounding area with distinctive chalk cliffs

Cartoon of proposed urban grain across the Ebbsfleet topography

Eighteenth century map showing the Old and New Town of Edinburgh

Green Lanes, Abode at Great Kneighton, Cambridge

A similar strategy is adopted for Horsted Park, on a pivotal site between Rochester and Chatham in Kent, where the interconnected houses and garden walls define a strong silhouette on the landscape escarpment. The threshold from new neighbourhood edges to surrounding landscape is too often ill-defined with disruptive perimeter roads or worse: the endless cheap timber fences to rear gardens. In this location opportunities exist to create new dwelling typologies which help to define a strong transition from built form to landscape. For example, early studies for a new neighbourhood at Northstowe, Cambridgeshire, reference the form of ancient settlement embankments discovered during local archaeological investigations and propose a contained new quarter of around 400 homes with a clearly defined settlement edge.

The neglect of a coherent response to these conditions with the erosion of boundaries by future expansions can lead to suburban sprawl - the spreading gravy stain of Orwell's tablecloth.

Similar care should be given to the transition from one specific area of a neighbourhood to another, in order to help build a sense of identity. This needs more than a superficial change in material or colour. The covered portals leading from the Great Court at Abode, for example, define the threshold between the arrival space of this significant neighbourhood and the more intimate mews streets behind. Without these devices this spatial distinction would be lost.

For this reason, investigations should be extended to include an analysis of the scale, grain (the pattern of streets and paths) and texture of the existing fabric. This will help identify the characteristic scale of existing streets, the relationship of built form to landscape and importantly, the configuration of housing clusters, which are often the most distinctive element of any neighbourhood layout.

Concept sketch showing defined settlement edge of a new neighbourhood at Northstowe, Cambridgeshire

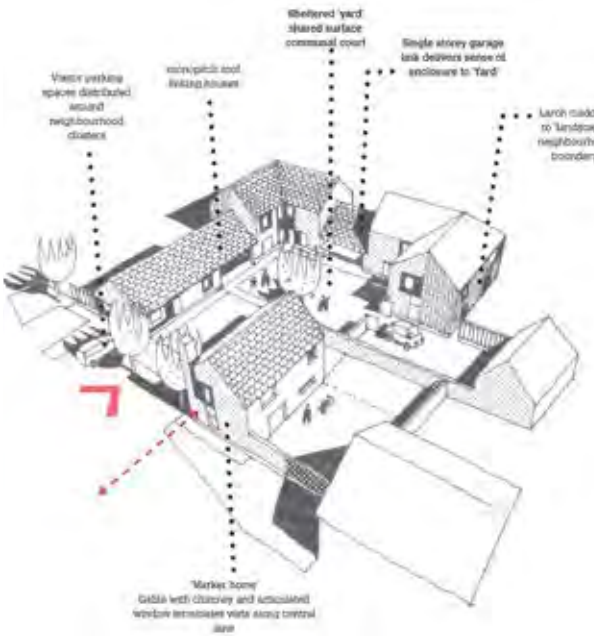Concept model of a new neighbourhood at Northstowe, Cambridgeshire

Threshold portal at Abode Great Kneighton Cambridge

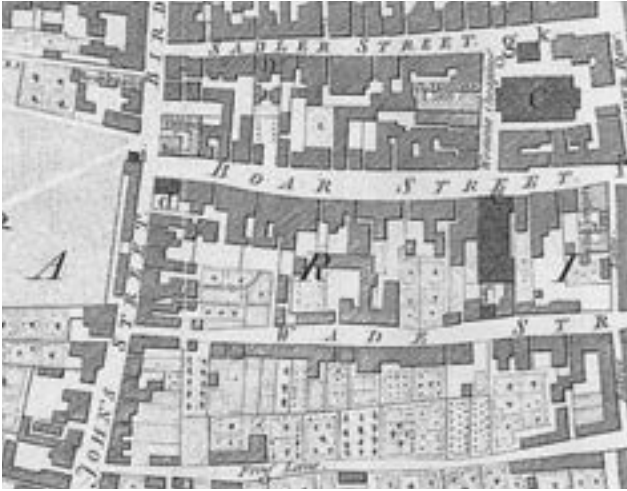**Create contextual masterplans**

Simplistic design guidance, requiring clear definition between public and private spaces, has resulted in a tendency to configure new neighbourhoods with a repetitive layout of perimeter blocks with continuous terraces of back-to-back dwellings. This type of layout is often a poor response to context, as are the now derided cul de sacs of so many post war developments.

More imaginative masterplans are required for urban expansions to peripheral suburban neighbourhoods which lack distinctive character. In these settlements an analysis of the grain of more typical regional settlements, vernacular forms or characteristics of local landscapes may provide valuable design cues for future neighbourhoods. At Horsted Park, Kent and Polnoon, East Renfrewshire, for example, the form of residential clusters took inspiration from local farmyard typologies. (Case studies pages 84 and 94). Mountfield Park, Canterbury is an example of a design directly inspired by Kent's orthogonal orchards, hop fields and shelter belts. Here the groupings of houses around a shared communal 'orchard' offer a contemporary communal focus directly related to the landscape history of this part of the county (Case study page 88).

Concept cartoon of 'farmstead' cluster at Polnoon, Eaglesham

In addition, an examination of many historic settlements (mostly pre industrial) may reveal a more localised response in building layout. The linear forms of ancient burgage plots, or the distinctive garden walls which connect the dwellings of some of Britain's historic villages, are examples of the UK's defining regional vernacular architecture.

Eighteenth century map of Lichfield chowing walled gardens

Adopt new typologies for modern lifestyles

By eschewing the suburban conventions of front and back gardens, opportunities arise to explore plans which may be more appropriate to contemporary ways of living. A garden to the side and not merely to the rear, for example, may open up the potential for more than one living space to have garden access. This offers the possibility of greater internal flexibility, and the potential benefit of extended seasonal use of this outside amenity.
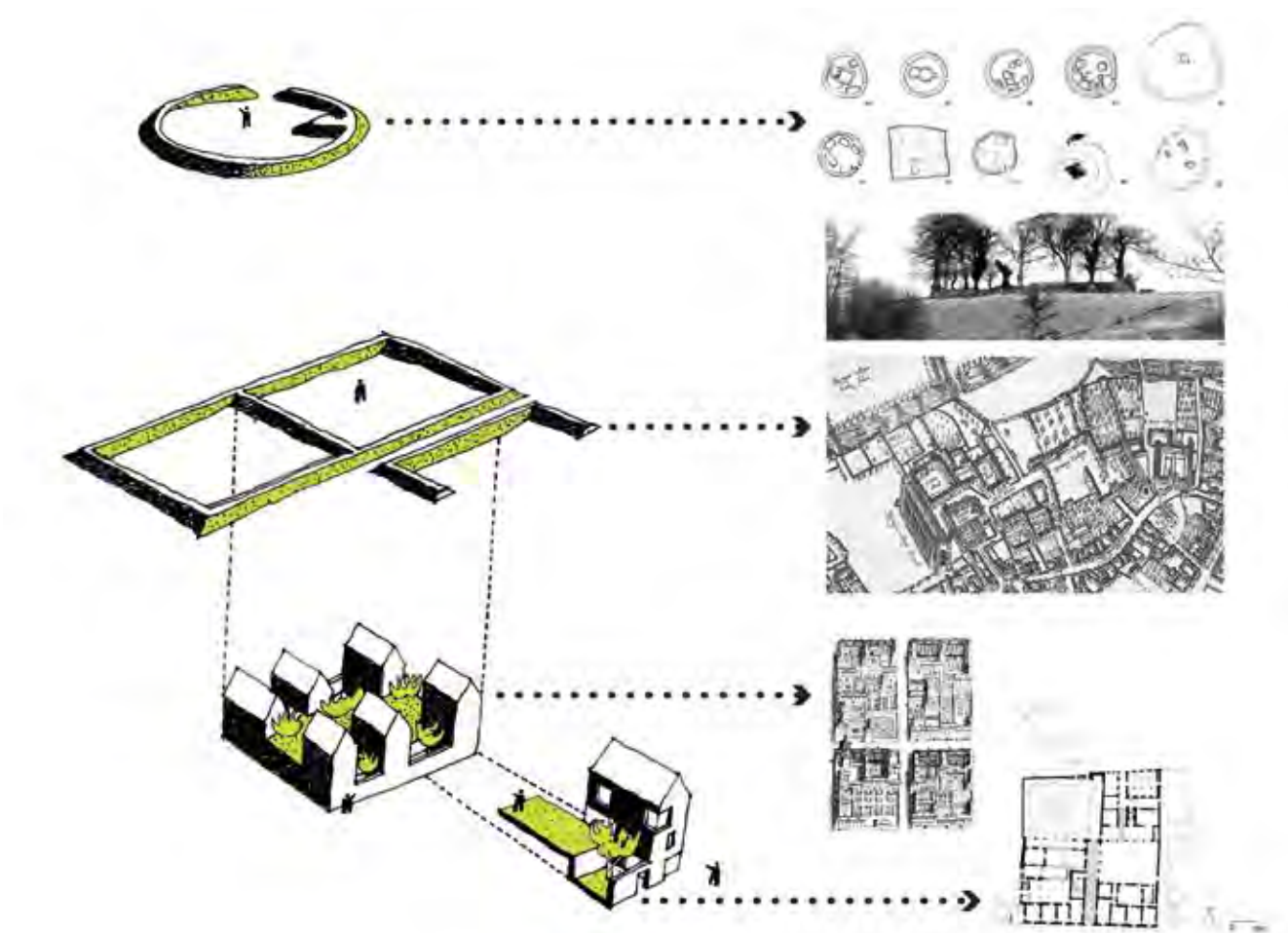
This configuration is explored in houses at Horsted Park and Great Kneighton (Case studies pages 84 and 106).

View from flexible interior to walled side garden at Horsted Park, Kent

Long house cluster at Abode Great Kneighton, Cambridge

Concept sketch for Ridgeway Village North West Cambridge

Reinvent traditional building forms

In searching for a design narrative, designs inspired through a distillation of place should not merely resort to stylistic mimicry.

The study of regional farmsteads or vernacular farmyard configurations, for example, may trigger a specific design response to the clustering and orientation of new homes within an exposed and windswept landscape. However, regional vernacular should not precipitate a thoughtless replication of agricultural vernacular architecture. This devalues the original typology and fails to respond to the everchanging requirements of 21st century living patterns.

Researching an appropriate narrative is just the starting point in a design process which is continually enriched by the overlaying of responses to a range of other technical, social, economic and environmental issues - all of which are important components of good residential design.

The simple barn structures that are a distinctive feature of the British rural landscape, for example, have a simplicity and economy of form which provides a useful precedent for the design of contemporary domestic space: highly flexible, adaptable, economical in form and easy to construct. The Long House configurations of black boarded dwellings at Great Kneighton are an example of this form. This is combined with the local village morphology of connecting garden walls and the linear grain of medieval field patterns and burgage plots to create distinctive clusters of new homes.

Interpret historic settlement patterns

Certain locations have very distinctive physical characteristics: the collegiate courts of Cambridge; the wynds and closes of Edinburgh Old Town; the twittens of Hastings; the gridded orchards and the hop field landscapes of Kent. Others have hidden or less obvious defining characteristics requiring a more forensic approach to contextual analysis.

Examining historical records - old maps, archaeological surveys and place names - can reveal patterns which suggest contextual design narratives. This might be a structured hedgerow or historic field pattern or archaeological remains, such as Bronze Age, earth works, or the Victorian military structures at Horsted Park. Archaeological investigations of Cambridge University's major development site at North West Cambridge recently revealed evidence of Bronze Age, Roman and medieval enclosures.

The alignment of these earthworks helped to define the distinctive street form of the initial design proposals for the new Ridgeway Village as part of the wider development strategy.

The design narratives that grow out of these studies should be reinforced by a similar approach to the development of a specific architecture and use of materials. While modern manufacturing and transportation allows mass produced products to be deployed across the country (with building economics being the driver for material selection), this does little to anchor new housing developments in a local context.

Regional building characteristics reflect the culture, climate and materials that were once locally available. Very often the geological characteristics of an area gave rise to centuries of building forms and material qualities. These established highly distinctive local characteristics that communities identify with and value as timeless expressions of the region's history. The stone buildings and dry-stone walls of the Peak District, with its undulating landscapes, make for a very different visual quality to that of East Anglia, with its large low hedgerows, brick and flint walls and steeply pitched red Roman tiled roofs. Similarly, the urban terraced forms of Cambridge are very different from those of Edinburgh, and rural housing in Kent with 'outshut' projections differs from the long low stone buildings set in a Cornish landscape.

The architect's role must be to find a contemporary regional language that can support 21st century living requirements and become an authentic evolution of tradition. Open plan living, large kitchens, utility rooms, home working spaces, parking, large glazed areas, and gardens that are now 'outside rooms' all require new plan forms for our time. These aspects are discussed in more detail in the chapter on the iconography of home.

Historic typologies - often with low ceilings, cellular rooms, small windows, utilitarian external space (that had nothing to do with leisure) and pre-car - present a stark contrast with the requirements of the modern home.

The adaptation and replication of these historic forms can become a caricature of history, and neither adequately address new lifestyles nor satisfactorily extend regional traditions. Local communities are very aware that little or no conscious design effort has been deployed to create an architecture that can successfully reconcile tradition and innovation.

Find inspiration in local architectural detail

Just as research can be deployed to develop a narrative for settlement form, so too can an understanding of regional character help deliver a narrative for a new place-specific architecture. While material choices make reference to place, they should also be assembled and detailed to support the overriding settlement narrative. Detailing should augment architectural expression in a way that distinguishes one neighbourhood from another.

The steeply folding tiled roofs of Kent that almost reach the ground, or the distinctive rendered chimneys of the 18th century village of Eaglesham near Glasgow (unusually located on principal building facades), are examples of significant architectural devices that could be redeployed to define a new contemporary language of place. At Polnoon, a new extension to Eaglesham, the harling-rendered Eaglesham chimney is reinterpreted to support the new streetscapes and provide wayfinding markers across the neighbourhood. (Case study page 94)

A distinctive chimney at Eaglesham, East Renfrewshire

A reinterpretation of the Eaglesham Chimney

Elsewhere, new development proposals for Mountfield, on the edge of Canterbury, employ modern housing typologies with large Kent 'outshut' red-tiled roofs. These roof forms have been adapted to absorb car parking and provide a sectional configuration to the new homes that connects ground and first-floor living through double-height volumes (Case study page 88).

In Cambridge, gault brick is used in many of the city's new settlements, acting as a visual and historical thread across the city. The city's urban housing stock is, however, quite different to that found in the surrounding villages. This observation informed the design response at Abode in Great Kneighton, where distinctive interwoven character areas support very different contemporary housing typologies, including urban terraces and mews housing, as well as 'gatehouse' apartment buildings and long rural barn houses. Materials are deployed in this development to support these differing housing forms. Gault brick and parapet flat roofs are used to give expression to the more urban forms, while large pitched roofs and dark-stained boarding develops the more relaxed and rural qualities of the housing on the settlement edges. The detailing on this development is also significant with pattern and textured brickwork giving expression and celebration to entrances and providing domestic scale and compositional articulation.

Textured brickwork provides composition and articulation to homes at Abode Great Kneighton

Concluding remarks

A thorough understanding of context will achieve a 'distillation of place' and imbue the design of new residential neighbourhoods with a strong identity.

Referencing local characteristics such as scale, grain, typological form, materiality and colour can assist in anchoring new developments within their immediate and regional contexts. These should be integrated with wider design considerations such as the definition of edges and thresholds, streetscape silhouettes, and a clear hierarchy of streets, lanes, mews and squares, which can be combined to deliver new neighbourhoods with their own unique character.

Recommendations for creating places which respond to their context

- **Understand the context** - good neighbourhood design should begin with an analysis and understanding of the physical, historical and cultural contexts, including topography, built fabric and landscape patterns.

- **Interpret the context** - understand vernacular forms and the characteristic grain of regional settlements to inspire new contextual masterplans and create a strong narrative of place.

- **Respect boundaries** - existing and new settlement edges and boundaries should be understood and clearly defined to prevent urban sprawl.

- **Celebrate thresholds** - use architecture and landscape to mark the transition between distinctive character areas.

- **Reinvent traditional building forms** - take inspiration from the local vernacular where appropriate while inventing contemporary typologies for modern lifestyles.

Living streets
Designing people-friendly streets and open spaces

Streets, gardens and parks are essential elements in creating popular, healthy and sustainable neighbourhoods. Yet in many new developments, houses sit in bleak and utilitarian streetscapes. In this chapter we explore how to create successful neighbourhoods where people aspire to live.

The British Isles is renowned for the charm and character of its traditional towns and villages. Many aspire to live in these settlements, away from the dense urban cities, but what is it about this lifestyle that is so attractive? A key feature is their green character.

With the pressure to build many more homes at higher density across the country there is a danger that in new development this much-loved green character could be lost, or worse, that the quality of external space is overlooked altogether.

Housebuilders' own research reveals that people tend to decide within the first 15 seconds whether they want to buy a home. If new homes are set in hard, characterless, parking-dominated streets festooned with refuse bins and covered in meter boxes they will struggle to make a good first impression.

Streets, gardens and parks should provide places to meet neighbours, spaces for children to play, spaces full of nature, plants and trees. They should provide areas to move, to breathe, to get out into. Well-designed outside spaces can promote sustainable communities and can create delight. They can provide a sense of wellbeing, of safety and ownership. They should be places where people want to be, places that people experience in the first15 seconds and think, 'I would like to live here'.

As the urban designer Jan Gehl has noted: "Cultures and climates differ all over the world but people are the same. They will gather in public if you give them a good place to do it."

This chapter explores the main considerations for designing and creating successful neighbourhoods with the streets and spaces outside our homes.

Green character of traditional village setting in rural landscape

Connectivity - the key to creating harmonious new neighbourhoods

Car dependency poses a great threat to the health and wellbeing of suburban residents and this is worsened by poor connectivity in the neighbourhood layout. For example, the opportunity to access the open, green, landscaped spaces and other facilities around our suburbs (woods and fields, schools, shops, play areas and pubs) is often thwarted by homes located in cul-de-sacs within a warren of unconnected streets that trap residents. This disconnection from the surrounding spaces and facilities limits the options to walk or cycle. This in turn promotes unhealthy, inactive lifestyles which stifle interaction with neighbours and local communities.

Connectivity is key when designing new neighbourhoods. Creating links to existing cycle and footpath networks is paramount. Successful neighbourhoods rely on easy connectivity to spaces and facilities to promote more active, healthier lifestyles and social interaction. It doesn't matter how extensive and beautiful the surrounding open landscape is, if it is remote, disconnected or inaccessible, people will not go there. It also doesn't matter how close the local school or shops are; if there is no easy route to them by walking or cycling, people will drive.

Cycle paths promote connectivity in new settlements

Preserving the green character of suburbs

Green landscaped spaces are an essential aspect of suburban character. There is also a great benefit to health and wellbeing from green landscape because it links us to the changing nature of the seasons. Connecting homes and communities to nature through planting and landscape is therefore of paramount importance in successful suburban neighbourhoods.

Visual connection to the wider countryside

An easy win for connecting homes to the natural environment is to take advantage of any surrounding natural landscape beyond development boundaries.

Aligning view corridors along streets to surrounding areas of natural landscape or open space creates visual connection to the wider area. When open space and landscape surrounds a development, facing homes onto these areas, rather than turning our backs on them can enhance the sense of space and landscape without needing to sacrifice large areas to open space within the development.

Effective use of open space within new neighbourhoods

Open space within developments should be planned in strategic locations. Providing open spaces as an afterthought in the spaces left over after planning the layout of buildings seldom achieves good results. Such areas are often less accessible, poorly overlooked and can attract antisocial behaviour, resulting in poor quality and expensive-to-maintain areas that provide little benefit.

Instead, open space should be planned into the heart of a scheme to promote easier access for all residents. These spaces can be connected to the primary routes to ensure more people use them. Such spaces can be designed more intensively to provide a range of functions including ecologically rich landscape, informal and formal play, orchards, community gardens and seating. They can also contribute to more sustainable drainage design by providing storm water storage.

As such, these spaces can be smaller and more efficiently planned to meet a wide range of needs. They can also provide a focal point and an identity for a community.

Greening the street

There will always be tension between the pressure to plan the maximum number of new homes on a given piece of land and the aspiration for large, open spaces. Therefore, integrating green infrastructure into streets through trees, hedges and planting is an efficient way to enjoy the benefits of natural landscape and preserve the natural character of much of suburbia. Greening the streets also improves air quality and makes the streets more attractive.

Littlemore Park near Oxford is designed around the rich natural landscape which it looks onto. Physical links for walking and cycling are created and visual connections to the surrounding landscape ensure that all areas within the scheme feel connected both visually and physically to the surrounding area.

Planted streets at Littlemore Park

Apartments at littlemore Park face out over the development boundary to connect residents with the nearby Littlemore Brook and the wider landscape setting

Reclaiming the street - dealing with the car

With increasing density of housing and high dependency on car ownership in suburbia, it is very easy for streets and spaces to become filled with vehicles. There is little opportunity for planting or for play within these harsh environments. The rich abundance of Victorian terraced streets illustrates the problem well. Once full of life, with children playing and neighbourly conversation, they are now full of cars, queuing traffic and paved-over front gardens. Crossing the street can be dangerous too, with parked cars screening the view of fast-moving vehicles. These streets were not designed to accommodate cars but our streets can be.

One approach has been to provide for less parking, but this seldom results in fewer cars, just more car-jammed streets and local competition for the few parking spaces available. New housing can be designed to provide space for parking to enable car ownership, but through well-designed connectivity and access we can help to reduce how often we drive. Providing for parking but preventing it from dominating our streets and open space is essential to enabling these spaces to be safe and welcoming for all. Reducing parking within the street also allows space for trees and soft landscape to soften what otherwise can be hard and unwelcoming spaces.

Accommodating the car

There are many ways to arrange parking that can enrich a development. The excellent guide by English Partnerships, *Parking, what works where*, is a great starting point.

In our approach to designing new schemes we can look at a range of alternatives to on-street parking. One is to provide parking between dwellings, creating detached and semi-detached homes with side parking. This hides the cars from the street but makes them easily accessible to residents. Frequent driveways that provide access to this parking naturally discourages unwanted street parking as this would block in people's cars.

Alternatively, removing access to parking from the front of the homes altogether can release the streets for informal doorstep play and planting. Rear parking courts have often been used to achieve this but these must be handled with care to avoid creating lifeless, inhospitable areas. Other solutions are available. In Victorian London, large family homes were built in terraces overlooking open spaces with no vehicles parked on the street. The vehicles - horse-drawn carriages in this case - were instead housed in mews to the rear. Terraced homes with double garages accessed from mews to the rear, perhaps with an annex above the garage, provide high density, large family houses that can accommodate the car without allowing parking to dominate the public realm.
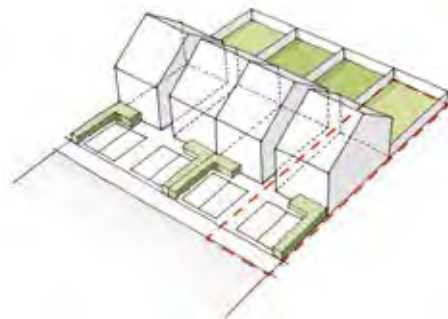

Terraced streets can be free from parking allowing these spaces to be more welcoming to pedestrians and cyclist and give more opportunity for soft landscape
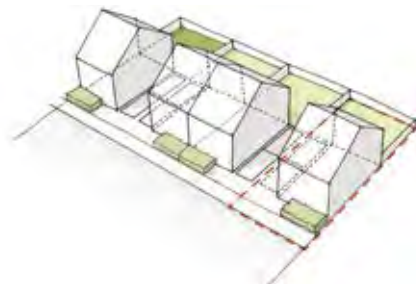

Mews at Wornington Green create characterful informal streets

Mews streets at Chobham Manor provide alternative off street parking solutions

Rear mews parking provides an alternative parking solution that enables the fronts of these homes to be free from parking
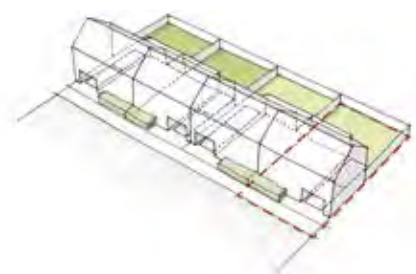
Making efficient use of land

Terraced streets are often perceived as being a more efficient use of land but this is often not the case. By the time parking space, paths to rear gardens and the gardens are accommodated, the site area can be very high. The diagram below illustrates a range of four-bedroom houses with different parking solutions. The houses and the gardens are all the same size. Comparing terraced houses with wide fronted, semi-detached and mews garage dwellings demonstrates the area of land they require is the same. So terraced streets are not necessarily more efficient than many other forms of housing. A range of parking solutions provides for a variety of character with fewer car-dominated streets and more street planting.
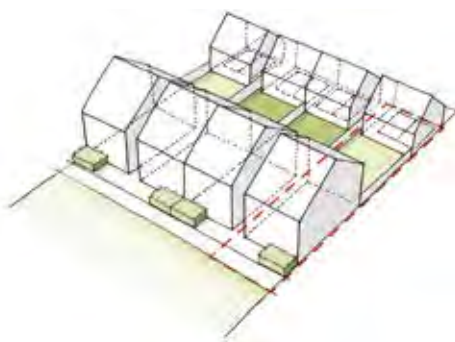
Terraced streets with car dominated frontage

Side parking removes cars from streets

Wide frontage houses with garages concealing parking

Rear mews parking removes road from front of homes

Future advances in transport will impact on neighbourhoods – but how?

With advancing technology and increased concern over environmental pollution, some future gazers predict the demise of individually owned fossil-fuelled cars and the rise of driverless, clean-fuelled vehicles. These so called 'robo-taxis' and Uber-style ride sharing schemes may become so cheap that it may not be worth the expense of owning a car. In time, this prospect has the potential to create a paradigm shift in the way we travel. How will this affect our new neighbourhoods and what impact might it have on the way we plan new developments?

Some recent and planned development may provide an answer. Greenwich Millennium Village in London (which was a suburban area when it was planned but is now absorbed into a higher density area) adopted new approaches to accommodating the car which have worked well for over 12 years. It has removed cars to the edges of the development into a small multi-storey car park. This has recaptured the public realm from vehicles and released opportunities to optimise density, open spaces and routes that work for people rather than vehicles.

If car ownership were to reduce as predicted, even these remote parking areas could also become obsolete, releasing more land for homes or landscaped open space. If this paradigm shift were to take place, perhaps we might again see a resurgence of suburban terrace forms made popular by the Victorians, with streets once again full of life and free from traffic.

Millenium Village enjoys car-free open space

Removing clutter from the street frontage

All the requirements of modern life need accommodating. Places for bins and bicycles need to be provided so these do not end up cluttering the streets, and the services modern homes require should not be allowed to clutter our street facades with vents, grills and meter boxes.
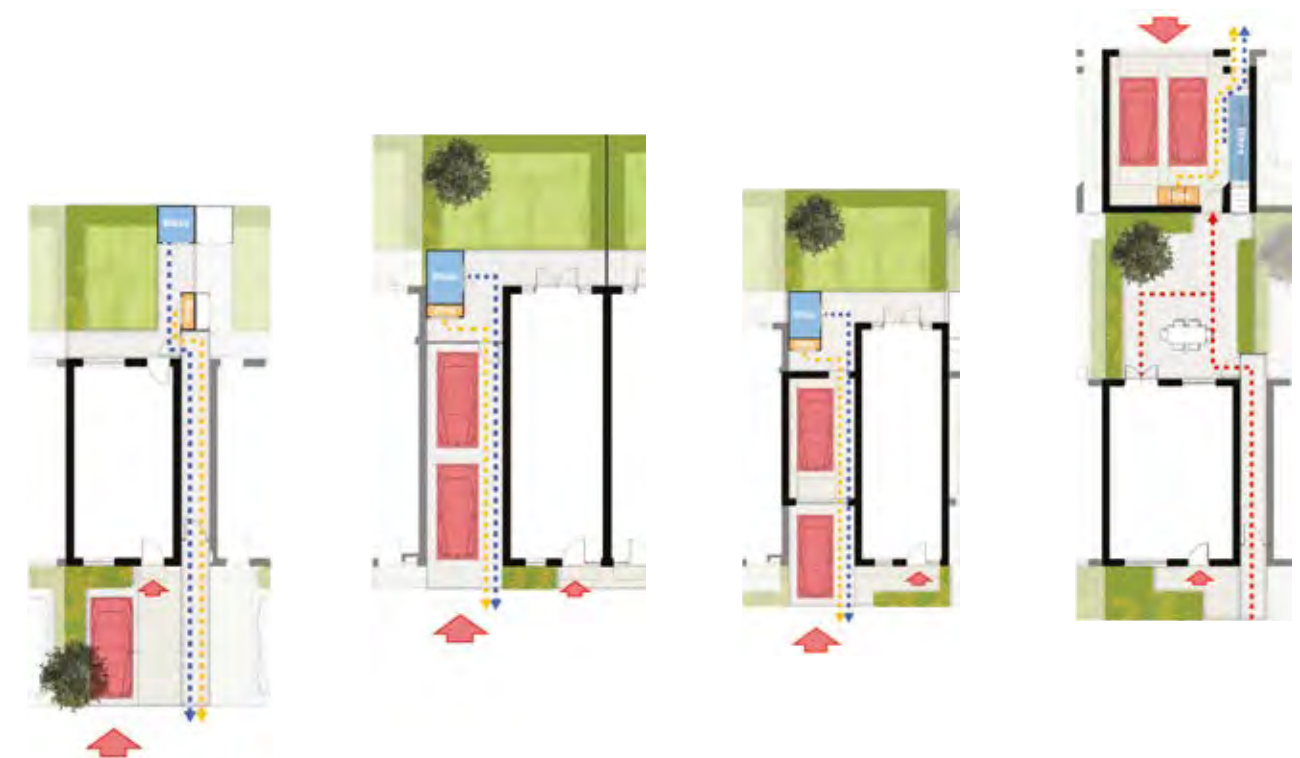
Designing for cycle parking and bin storage

Successful neighbourhoods must consider all the needs of modern sustainable living. This makes providing accessible, effective and usable places to store bicycles and refuse bins an essential consideration in planning our homes and our streets. Traditional terraced streets are often ill-equipped to allow for these facets of 21st century living. Bins are left by front doors and bikes are chained to lampposts or railings. Like cars, they clutter the street. If we can remove unsightly parking from dominating our streets, we should also seek to remove unsightly bins and cycle parking too.

Rear gardens provide a great opportunity to remove this clutter from the street, however access should be convenient. Terraced streets require long rear alleyways to access each back garden. These alleys are often unpleasant and awkward to use, stretching across neighbouring back gardens, and so residents often don't use them. Short, private alleyways between detached or semi-detached dwellings provide simple convenient access to rear gardens.

Providing space to the side of homes enables the integration of parking, access to the rear garden and more effective streetscapes, solving a number of issues. This makes semi-detached and detached homes inherently easier to service and, as demonstrated, not at the expense of density.

Where possible garages, either to the front of homes or in rear mews streets, provide very effective accessible storage but these must be designed to be large enough. Pulling large bins alongside an expensive car with insufficient space to move will discourage their use. Local authorities in some areas such as Cambridge, where cycling is very popular, provide guidance on the effective size of garages to accommodate all these functions to ensure they can be effectively used.

If the front of the home is chosen to locate the bin and bike stores, they must be carefully designed to be attractive and secure. It is difficult to make a good first impression if your first experience is of a dirty, smelly refuse bin!

The diagrams illustrate different approaches to achieve accessible bin and bike storage away from the street frontage

Appealing facades

The fronts of homes create the backdrop to public spaces and streetscapes and this is another area where we can learn from the Victorians. They often used a higher quality brick on the frontage with cheaper bricks to the side and rear. Attention was lavished on the front door to make this a special feature, apparent to every visitor. The result is very attractive houses that have kerb appeal. They are designed to make a good first impression.

Interiors have a direct impact on the appearance of the frontage. Many modern houses are cluttered with ugly meter boxes, flue terminals and ventilation outlets.

Meter boxes dominate hard unwelcoming street frontage

Meter boxes can be located to the side or rear of properties. Meter boxes can be hidden within porches or a recessed entrance. Boilers can be located to the rear of the house or in the roof, and ventilation from bathrooms and WCs is better located to the side or rear.

Making sure furniture, kitchen units and radiators are sited away from the front elevation ensures windows can be generous to give a more open, welcoming feel from the street. Locating bathrooms at the back or side of the house ensures that often small and obscured glazed windows do not compromise the openness and generous proportion of the street frontage.

Finally, there is no better way of creating a good first impression than providing a generous entrance. Elegant canopies, large front doors, perhaps with a side light, immediately give the impression of a spacious home, even when the reality might be quite compact.

If we can avoid cluttering the facades of our homes, we can create attractive buildings that form a pleasant backdrop to richly landscaped streetscapes and open spaces.

Clutter free facades with generous windows and front doors create a welcoming street frontage

Designing streets where people feel safe

Attractive, people-friendly neighbourhoods are only possible where people feel safe. The layout of streets and open spaces can discourage anti-social behaviour by providing natural surveillance from surrounding properties and concentrating movement on to popular routes.

Research on neighbourhood safety shows that wide open streets with large front gardens separate dwellings from the street and limit the benefit that natural surveillance from the home provides. Narrower, more enclosed streets enhance natural surveillance and make people feel safer.

Removing cars from the street or from in front of homes enables streets to be narrower with a more enclosed, intimate feel. They are more immediately overlooked and make these places feel much safer.

Although the front of a house looks out on the public realm, when we turn off a street into a side road, the flanks of houses and back gardens can be dead, lifeless areas. Creating activity and outlook from the sides of houses, such as moving the entrance onto the side at the end of a terrace, can bring these 'hidden' spaces to life.

Other more innovative approaches can also be adopted to overcome these potentially lifeless and unsafe spaces.

At Chobham Manor, in Stratford, east London, the end-of-terrace mews house has been re-invented to provide activity and an outlook on the street and to address the changing and varied needs of households. It does so by providing a more flexible housing model to enable multi-generation living, live/work space or an annex for sub-letting.

The multi-generational house at Chobham Manor has a separately accesible annex and shared terrace space

At Chobham Manor front doors and windows on the end of a terrace provide activity and serveillance onto often lifeless flank walls

Maintaining streets - who pays?

No matter how well-designed or well-built our new developments may be, will they stand the test of time? Will our children and their children want to live in the streets and spaces we build today?

As the saying goes, 'The mightiest oak in the forest is just an acorn that held its ground'. Our new developments can present far more challenging conditions for acorns to 'hold their ground' than a forest. If we want to see the young plants and trees in our streets mature into rich landscapes that can be enjoyed by future generations, we will need to look after them and this costs money.

The legacy of austerity means local authorities sometimes ask for trees and landscape to be removed from designs for the streets as they cannot afford to maintain them.

Some housebuilders, recognising the value of natural landscape to the setting of our homes and neighbourhoods, are rising to this challenge by keeping the roads and open spaces within their developments in private ownership. This provides greater freedom to deliver high quality places but results in service charges being imposed on residents to meet the burden of maintenance costs. Austerity has not only affected public services, it has affected households across the country who can ill afford the added cost of service charges. If we are to create developments that can mature into sustainable, attractive neighbourhoods, we need to find a way to both design and maintain great quality places.

Here are three suggestions.

Nurture communities that care

Our streets and spaces are not just used by individuals; they are used by the whole community and it takes a whole community to look after them. Attractive places attract people. As private garden sizes shrink, so there may be more opportunity to engender neighbourhood support to help maintain and monitor the public realm, close to where people live, or use regularly. This can also be a vehicle to enable public spaces to change and adapt to the needs of those that use them by requiring maintenance authorities to listen to the concerns and suggestions of local people, and to help with funding and fundraising. This virtuous cycle starts with good design and leads to healthy, sustainable communities that look after their spaces. The burden of maintenance becomes cheaper.

Reduce service charges with higher density

Design can play a key role in reducing maintenance costs. Increasing density can actually lead to better spaces as the cost of maintaining the streets and space can be shared more widely. The case studies that follow illustrate how higher density developments do not need to mean loss of open space. It just requires using the space more efficiently and dealing with cars so that the spaces that remain and the planting within them have a bigger impact. Specifications can be directed towards robust, long-lasting materials and components which minimise defects and future maintenance costs.

Ring-fence Section 106 funding for maintenance

New developments not only attract new tax-paying residents but also attract one-off payments from developers to local authorities to pay for the increased infrastructure and services they will require. The Community Infrastructure Levy (CIL) and Section 106 payments can result in large payments to councils to fund the infrastructure requirements. Given the substantial sums of money coming to local authorities from the new developments, some of these payments should be ring-fenced to support the cost of maintaining streets and open spaces in new developments.

Nurturing community landscaping ensures public space works well for local people

Concluding remarks

Inviting streets and open spaces are critical to building successful new neighbourhoods that can become sustainable communities. Through connection and accessibility, individual developments become part of a more cohesive whole. With careful planning, new developments can provide for all our needs; for open space, landscape, play; safety and delight as well as the practical needs for parking and servicing our modern lifestyles. If we think beyond the individual home, we can create places where communities can flourish, where health and wellbeing are enhanced, where suburbia's essential green character can be maintained and where generations to come will still aspire to live.

Recommendations for designing people-friendly streets and open spaces

- **Make it green and keep it green** - allow plants, trees and landscape to permeate streets and open spaces. Planting provides shade, improves air quality and enhances the visual appeal of our streets, especially through seasonal change.

- **Create connected neighbourhoods** - accessible neighbourhoods, with connections to local footpaths and cycle routes, enable easier access to local facilities and open spaces, promoting healthier less car-dependent lifestyles.

- **Recapture the streets for people, not just cars** - create safe appealing spaces where planting, trees, neighbourly interaction and doorstep play can flourish, and where natural surveillance will deter anti-social behaviour.

- **Banish the clutter** - provide discrete and convenient places for car parking, cycle and refuse storage, mechanical and electrical kit, preferably on-plot and away from the street front.

- **Use open space as a community focus** - locate shared parks and gardens at the heart of a neighbourhood and encourage people to participate in their design and management.

- **Plan for the long-term to foster a sense of community** - use robust materials and planting that can survive and flourish. Create spaces that people enjoy and care about - that way, they will treat them better.

Iconography of home
Crafting modern houses which feel like home

In this chapter we explore the characteristics that make a house homely. Engendering a sense of belonging, an abundance of light, and spaces that suit 21st century living are essential characteristics in what we are calling the iconography of home.

What do we mean by the iconography of home?

The love affair with suburban life has generated a lexicon of recognisable symbols that act as signifiers of warmth, protection, privacy, safety, retreat, nurture, welcome, comfort and personal expression. Examples from the past are numerous – the arched front door, the hearth, the stoop, the porch, the lych-gate, the chimney breast, the bay window or the cat-slide roof. High garden walls, closed gates, privet hedges, the crunch of gravel on the garden path all hint at family life beyond and create layers of arrival and privacy. They embed the home in its setting.

Roofscapes often define the street, framing views with their silhouette or creating a sense of protective enclosure and often coming close to the ground to bring roofing materials within reach.

The recognisable motifs of our homes also extend within, revealed in details from celebratory staircases to decorative fire places and hearths, elaborate picture rails, ceiling roses and wood panelling. This iconography reaches through the home to the rear garden - a private oasis, a retreat or perhaps a productive landscape where food is grown and we reconnect with nature's seasons and cycles. The garden is a private opportunity to rehearse our relationship with the world around us.

The ubiquitous 'period feature' of the estate agents' blurb offer motifs that celebrate craft and artistry. Pioneers in suburban architecture such as Frank Lloyd Wright, Norman Shaw, Parker and Unwin all understood there should be an identifiable human touch in the expression and details of the home. The search for and co-ordination of these human details is what we call the 'iconography of home', or more simply we talk of designing 'house shaped houses for people shaped people'. The best modern neighbourhoods use and evolve these signifiers without resorting to pastiche.

In this chapter we will look at why the iconography of home is important in the 21st century and what lessons we can take from successful places. We then consider the contributing parts of a modern iconography of home through more recent examples.

A common trait of popular suburban architecture is that it has an identifiable human touch as shown in these homes, including Cane Hill Park, above and others below.

Frank Lloyd Wrights House and Studio in Chicago where the strong expression of the gable acts a signfier of the domestic life within

Front boundaries and tree planting are designed to harmonise the homes with their setting at Leithfield Park

The informal compositions of homes in Bedford Park bring together gables, bays, chimneys and traditional materials farmed by hedge boundaries

The informal arrangement of gables and roofscape at Leithfield Park echo the tree lined setting which frames the neighbourhood

Why do people prefer period homes?

Evidence suggests that when choosing a home these days we don't get a rich emotional response from new neighbourhoods. As the RIBA found in its 2011 publication, *Case for Space*, many purchasers don't even consider the option of a new build home, or at least not until all other options have been exhausted. There is a growing level of public disquiet at the quality of new developments – which is hampering much-needed housing delivery.
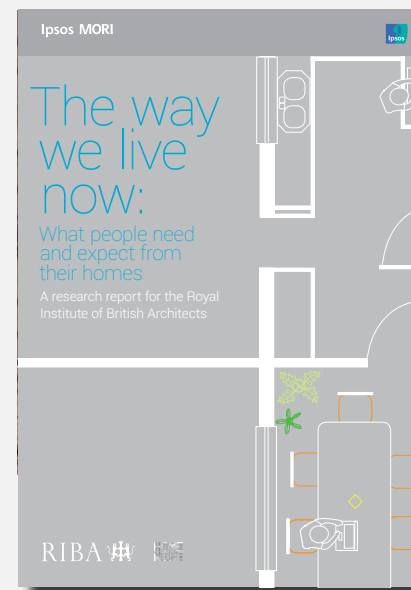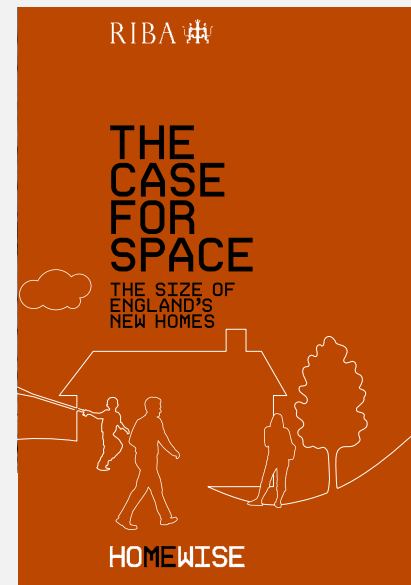
Working with communities across the country we repeatedly hear of an assumption that new homes will be smaller yet more expensive than the second-hand equivalent, and will be of poor quality. The loss of the human craft and artistry in building, regularly features in the national press and various political enquiries pointing to basic quality problems in many new build homes. The Home Builders Federation 2017 customer satisfaction survey found that 98 per cent of purchasers had reported snags and problems with their new homes since moving in - with 25 per cent reporting more than 16 faults, and 38 per cent experiencing more problems than expected.

We appreciate the deep emotional bond that people feel for their chosen home. We understand the layers of memory, culture and aspiration that come together to create this bond. Research by the RIBA from 2012, *The way we live now*, points to this connection being the overriding factor for many choosing a home, yet HSBC's 2012 survey of 2,000 home purchasers reported that couples spend longer choosing their summer holiday or the menu for a party than a new home.

While this might seem an extraordinary way to decide on the biggest investment that most people will make, perhaps this speed of decision making reflects an intuition for the combination of setting, appearance and layout of the home that we immediately respond to.

In short, we need new homes to appeal immediately; otherwise they will continue to find few home purchasers. We think this is best achieved through a modern iconography of home.

We can see from neighbourhoods featured in this report that a distinctive iconography of home can dramatically change the desirability of the homes. For example, at Hanham Hall, England's first large scale zero carbon housing development on the outskirts of Bristol, 96 per cent of the new residents never considered living in a new build home before

and had moved from period properties. Hanham Hall's unique iconography of home is a celebration of the relationship between the homes and the generous open spaces throughout the development along with more flexible internal layouts that meet modern modes of living.

This ability to inspire and encourage people to enter different parts of the housing market has never been more important. If we are to meet housing demand by increasing the supply of new homes, it must be because people positively want them, not because it is their only affordable option. Communities must be able to choose to build new neighbourhoods confident that they will leave a legacy for future generations that contributes to our rich heritage - and which are better than many of those which came before.

Learning from successful neighbourhoods

We think that fundamental to creating successful new housing is a harmonious and symbiotic relationship between the way we live, the setting and the home. In our most loved cities, towns and villages this relationship can be found in the wider composition of a neighbourhood's open spaces and streets, into the gardens and rooms of the homes, through to the smallest of details - window frames and door handles - and everything in between.

This continuity might be found in long-established rural settings. Equally, it may reside in the composed civic confidence of Georgian squares.

We are fortunate to enjoy a rich heritage of desirable neighbourhoods across the UK: so why can't we merely replicate them to meet today's housing needs?

Many desirable places to live have evolved over hundreds of years. This allows successful elements to endure, while the less harmonious fall away or are replaced. It is challenging to attempt to replicate this organic form of growth quickly through a much shorter design process.

The New Urbanist approach of replicating historic exemplars, almost as a stage set, ignores the fact that our lives have changed dramatically in the intervening centuries. Some buyers will pay a premium for period homes and then strip out and modernise the interior to suit a 21st century lifestyle. Changing demographics, shifting lifestyles, new technologies and increasing appreciation of our impact on our natural world: all these require new solutions, not copies of past ones. How we make reference to the past will be just one of many strands that come together in our modern-day iconography of home.

At Hanham Hall the homes enjoy first floor living rooms with large balconies and glazing that enjoy views onto open spaces

The gentle crescent of interconnected villas at Cane Hill Park draws on our Georgian heritage with townhouse living rooms overlooking the village green

Finding a modern iconography of home

There are four key challenges to creating new homes which are fit for today and better than those which came before: firstly, the fundamental qualities of light and space; secondly, the arrangement and adaptability of rooms for modern life; thirdly, embracing modern ways of crafting beautiful new homes that also refer back to our heritage; and finally, encouraging individual expression that will make a house feel like a home.

Light and space

It starts with light and space. In stark contrast to many new homes, popular period properties enjoy generous floor to ceiling heights and large windows, often in rooms with a dual or triple aspect. The most generous of second-hand homes will achieve daylight factors of 5 per cent in main living spaces and have ceiling heights reaching to 3 m or more. By comparison, ceilings in new build homes might be as low as 2.3 m and achieve daylight factors of less than 0.5 per cent. Yet historic properties are often difficult to heat, in part because of this combination of large windows and their greater volume. They were never designed with the benefit of modern materials or computer simulations, and heating costs are at least double those of contemporary homes.

Well-designed modern homes can provide both – the space and light of period properties and the sustainability credentials of contemporary housing. Some of the designs in this report feature spectacular vaulted living space extending to 4 m in height and delivering daylight levels in excess of 10 per cent - double those historic precedents. These can be achieved by opening up roof space and introducing roof lights, full-height glazed doors to balconies and further high-level windows.

A pair of new exemplar homes, the 'VELUX Carbonlight houses', achieved an average daylight factor across the whole house of 5 per cent while the main living space reached as high as 10 per cent. Again, at Hanham Hall first-floor living spaces rise up into vaulted ceilings of greater than 3 m with dual or triple aspects. The homes at Officers Field, in Portland, Dorset, have vaulted ceilings in the main bedrooms of even the smaller homes and many of these rooms enjoy great views over rooftops. These ideas were evolved in HTA's winning entries for the 'Home of the Future' and the 'Terrace of the Future' competitions, where split level living allows for triple aspect living spaces and floor-to-ceiling heights that extend up to 5 m.

Achieving high daylight factors requires generous glazing, but many new homes have small windows in order to achieve high thermal performance. This is a false economy. In the UK we spend an average of 96 per cent of our time indoors and there are demonstrable health risks associated with a low daylight environment. There are also significant comfort issues to consider when windows become too small.

The greater challenge with new homes is avoiding overheating. With well insulated walls and roofs, high efficiency windows and air tight construction, once heat gets inside a modern home there is nowhere for it to go unless a window is opened. Windows therefore need to be well shaded, big enough to create a high level of air movement and designed to maximise ventilation across and up through the home, and to provide comfortable and secure sleeping conditions at night. Upton Site C in Northampton has large south-facing windows protected by deep roof overhangs to allow ventilation through the space. Conversely, rooflights in the VELUX Carbonlight houses combine with automated openings within the staircase to form an atrium that helps ventilate the whole home.

Generous fenestration isn't just important to the experience of the interior, but t is also a key contributor to the character of the street, as we see for example with Victorian bay windows. Yet in many modern homes the main rooms face the rear garden and 'turn their backs' to the street. To create delightful streets, homes must have a public face of generous windows looking outwards and carefully designed to frame views of, say, a mature tree or distant spire.

A common mistake is to cluster small rooms on the street side of the house (for example, bathrooms and single bedrooms) and end up either with mean windows on the principal façade or windows which are over-sized for the room. A thoughtful internal layout will generate generous street elevations, so that each home contributes to the wider streetscape.

In summary, the first characteristics that we seek in our modern iconography of home are large windows alongside generous internal heights and volumes. Importantly, these will be located in the appropriate rooms, many of which will front the street and enjoy carefully considered and attractive outfacing views. The measure of their success will be in daylight factors of over 5 per cent for principal rooms and ceiling heights, which vary according to room use but reach to more than 2.5 m for principal rooms. Measurement of each room's volume alongside its floor area also allows a more sophisticated appreciation of a home's more complex characteristics. Main rooms will typically be dual aspect and positioned to maximise through ventilation both across and up through the home.

The interiors of the VELUX Carbonlight Houses are animated by daylight thanks to extensive roof windows and an open plan design

At Upton Site C the double height living spaces enjoy floor to ceiling glazing and roof windows shaded by a deep roof and balcony frame

The winning entry for the Barratt/AJ Home of the Future explored living spaces that stretched over two floors benefiting from vaulted ceilings and triple aspects

The winning entry for the British Home Awards ' Terrace of the Future' creates a generous double height living space facing a large square

At Trinity Square the rhythm of repetition of generous fenestration contributes to the overall streetscape and creates shared character

Modern homes for modern lives

Period properties with traditional construction can be adapted and extended in response to changes in lifestyle, but this is a difficult and expensive process.

The 21st century life is different to the lives that Victorian and Georgian homes were designed for. Boundaries between home and work have continued to blur with over four million of us now working from home - an increase of 50 per cent in the last two decades. An aging population, with one in four of us projected to be over 65 by 2035, increases the pressure to look after ourselves or care for relatives at home. Housing affordability and the rising cost of higher education have resulted in the 'boomerang' generation who are returning to live at home after university. More than 3.4 million of 20–34-year olds now live with their parents, an increase of 40 per cent in the last two decades.

Day to day family life and entertaining our guests have shifted requirements away from homes subdivided into a number of smaller rooms towards larger, single space kitchen / family rooms. Home technology is evolving with smart door bells and robot vacuums. Entertainment has changed from one household television to many personal devices and blanket wifi coverage. Our lives evolve rapidly around changes in technology and health care.

Modern homes can offer adaptability in a number of ways. First, as discussed in the next chapter, Harmonious diversity (page 54 and Case study page 98), homes can now be configured at purchase to suit the lifestyles of their occupants and made in a factory for delivery to site.

Adaptability also needs to be planned into a neighbourhood through the variety of homes on offer catering to a diverse range of residents or through the flexible configuration of each home so that they can be used in a variety of ways. At Cane Hill Park in Coulsdon a range of different home layouts exists within a shared family of elevation treatments – offering choice of split-level living or ground-floor living with different price points (Case study page 80). Similarly, at Leithfield Park, near Godalming, Surrey, three different internal layouts could be selected within the same elevation.

The winning entry in the 'Terrace of the Future' offered two separate living spaces allowing families flexibity to enjoy separate activities at the same time

At Leithfield Park homes could be customised with three different layouts within the same elevation

At Cane Hill Park four different types of home all share the same basic proportions, materials and windows offering choice within a shared character

A number of the homes illustrated in this report benefit from a full-width family room at ground floor opening to the garden and connected to a first-floor living space that opens up to a vaulted ceiling. This split-level living design offers two generous and connected spaces that allow families to enjoy separate activities at the same time.

Good layouts will also accommodate varying configurations for home-working. At Upton Site C in Northampton the living spaces accommodate a mezzanine study and library space. This was replicated at Hanham Hall and, in more affordable format, as a 'study platform' in the vaulted ceiling of the 'Terrace of the Future' design for Ilke Homes. These study spaces can alternatively act as nurseries or dressing rooms positioned just off the master bedroom.

Another flexible element to consider is a ground-floor bedroom that can be accessed independently and enjoys an interconnecting ensuite shower room. This arrangement allows guests to come and go as they please, elderly relatives to avoid stairs and offers the boomerang generation a degree of independence from the rest of family life.

Rear gardens are a crucial consideration for many - 8 out of 10 purchasers are shunning homes without a rear garden. A garden adds a 10 per cent premium to sale prices and rents, yet on average, renters will spend only 12 hours a month in the garden. This presents an interesting contradiction: gardens maximise the value of a home, but are often underutilised in our hectic modern lives.

The homes at Upton Site C enjoy spectacular views and a mezzanine study space allowing an ideal home working arrangement

The winning entry in the 'Terrace of the Future' family room opens the full width of the home to the garden

The Kingspan Passivhaus in Bedfordshire enjoys a flowing open plan family room that wraps around the garden and brings light deep into the plan with a lightwell

21st century placemaking

The iconography of a modern home will be found in using the most appropriate materials and the technology available to us.

Our predecessors embraced the technologies of their time, and consequently their architecture is entwined with contemporary advances in construction. From the perfectly weighted Georgian sash window to the pattern book terracotta and brick details of our Victorian streets, we still enjoy the way these homes embraced innovation and we expect them to continue to appreciate in value.

We now live in a future where technology has transformed every industry and aspect of our lives - except much of the construction industry, which remains based in old technologies. Research by McKinsey in February 2017 reported no significant improvement in construction productivity over the past 20 years, while the rest of the UK economy has almost doubled. Yet the UK's architectural profession is the most successful architectural exporter in Europe and we have many of the most advanced engineering and manufacturing specialists in the world. Together these industries have the potential to combine innovative thinking to solve the dual challenges of housing delivery and affordability.

Many of the homes featured in this report take their inspiration from their surroundings. Yet their appearance is not rooted in imitation; rather they celebrate our modern ways of making and the digital crafts.

At Officers Field in Portland, Dorset, the use of a cheaper 'roach' Portland Stone in an undressed finish of varying courses created an affordable use of a very local material with a rich heritage, and allowed it to be used widely across the site. At Hanham Hall the rendered façade of the Grade II-listed hall informed the materials of much of the surrounding site. It was complemented by an advanced timber cladding treated to maintain its appearance, while reducing the carbon footprint of the materials and minimising maintenance.

Brick is the material we most often associate with home, and it is the principal material for many of the places featured in this report, which celebrate the historic craft of bricklaying while exploring creative opportunities for continued invention. At Barnet and Southgate College in North London, the architects and bricklayers worked together to agree a palette which reuses historic details in creative new ways. Diverse approaches incorporate glazed brick, corbelling, polychromatic patterns, cut and rotated bricks. They turn this historic material into a visible expression of the handmade quality and human effort invested in creating a new home.

At Officers Field the use of local Portland stone influenced the shades of render that was used to create a shared colour palette that reflected the local vernacular

Precision factory made homes can enjoy character through the benefits of new digital fabrication technologies

At Trinity Square the rich variation of brick details within a simple palette of two bricks brings a handmade quality to the homes

At Hanham Hall the use of timber cladding reflected the sustainable ambitions of the project offering while modern manufacturing created a low maintenance and long lasting finish

Beneath the materials which dress our homes, the underlying structure is crucial to defining the shape and identity of a home. Decisions around the roof form and silhouette are fundamental to defining the way a home frames the street and relates to its context.

Modern precision-engineered and factory-based technologies can speed up the housebuilding process, with significantly reduced environmental impact, site waste and vehicles on the road. Construction workers can build in safe factory environments that support a more diverse and inclusive workforce. This in turn encourages more talent into the industry. With these changes and advances there is also the opportunity for personalisation and bespoke detailing. Three-dimensional printed relief in stone window surrounds, intricately carved CNC wood panelling and laser cut metalwork balustrades are the modern equivalent of period features.

One of the most important opportunities for modern technology is in the design of the entrance to the home.

Cars, refuse and recycling collections all place significant demands on our streets, and with the exponential increase in internet deliveries create additional pressures on the entrance. The emerging demand for electric car charging and potential of future drone deliveries, alongside the growing popularity of cycling, all place further demands on the front of the home.

The threshold must offer shelter, identity and welcome, as well as accommodating practical requirements, like post and deliveries, utility meters and rubbish storage and collection. It might accommodate boots and bikes, lighting to welcome you home at night and a provide you with a sense of security. Our case studies celebrate this experience of arrival and departure - from the veranda-inspired timber shading at Hanham Hall to the deep stone recesses that protect the seaside homes at Officers Field.

At Leithfield Park the roof of the larger homes is given a domestic scale through the shallow plan and varying ridge line

At Cane Hill Park gabled forms step around retained trees and topography to frame views over the landscape

At Hanham Hall SIPs panels were used to accelerate delivery, enhance performance and create the overhang for the entrance veranda

Concluding remarks
The iconography of home plays a crucial part in distinctive and locally responsive neighbourhoods. The comfort, practicality, appearance and image of modern homes must be embedded in a relationship with the site and setting. They should be light-filled and spacious, springing from an appreciation of modern needs and aspirations. Above all, if we are to expect people to welcome new homes to their neighbourhood, they must be better than those that have come before and must create a lasting legacy of which everyone can be proud.

Recommendations for crafting modern houses that feel like home

- **Create homes that 'feel like home'** - the moment they cross the threshold people should imagine themselves happily living in a new home.

- **Maximise light and space** - emulate the best of popular period properties with generous floor to ceiling heights and large windows, combined with modern comfort and energy efficiency.

- **Design for flexible living** - layouts should reflect 21st century lifestyles and accommodate changing demographics including the boomerang generation, home-working and caring for the elderly.

- **Embrace modernity while learning from the past** - new homes should adopt modern ways of making and digital crafts, while taking cues from our collective memory of 'home': so, traditional materials, domestic roof forms and a welcoming threshold.

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.
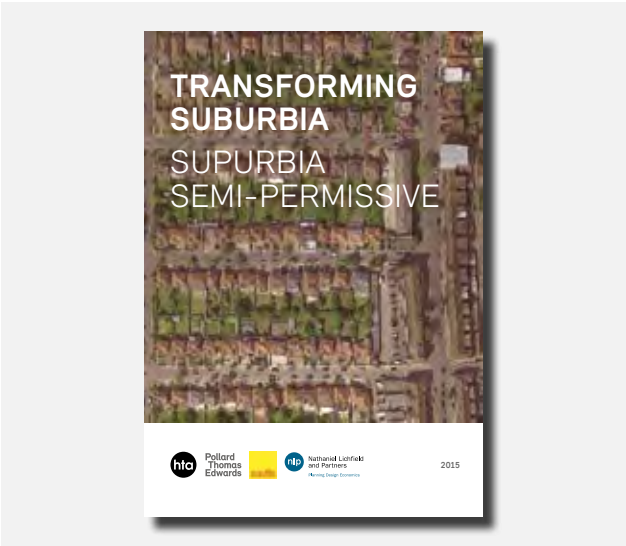
Micro-development

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.

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.

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

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

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 90) 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 104) 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 by responsible real estate company PfP 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 98) 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 78) 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 104), 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
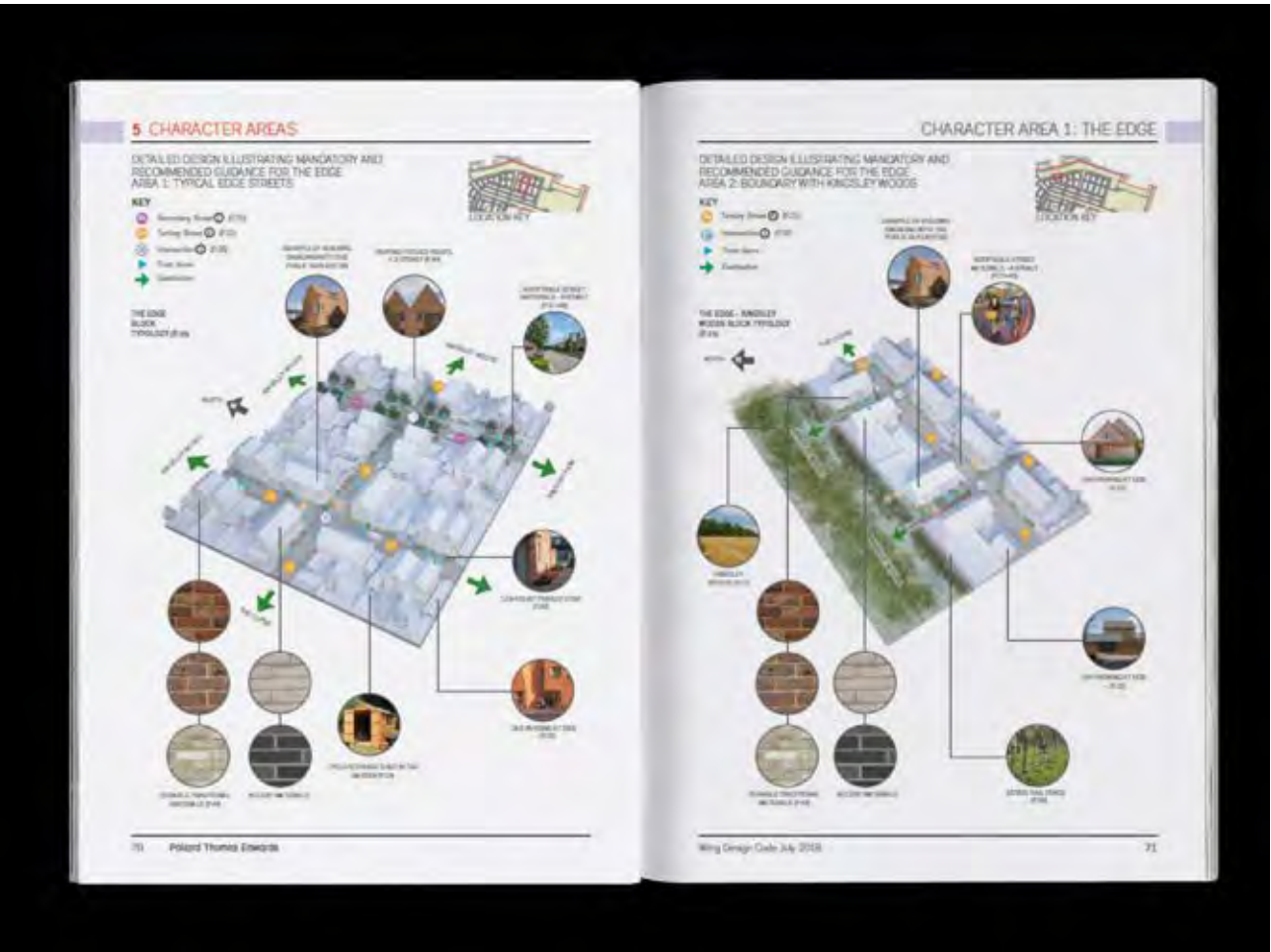
Design codes - a framework for variety or a straight-jacket for conformity?

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.

Distinctively local in summary

Beyond the practical needs of comfort and convenience, people aspire to live in places which promote health, happiness and, that elusive concept, community. We also value a sense of place: that our neighbourhood, village, town or city has some special and positive characteristics that make it different from others. This is how it can be achieved:

By creating places which respond to their context

- **Understand the context** - good neighbourhood design should begin with an analysis and understanding of the physical, historical and cultural contexts, including topography, built fabric and landscape patterns.

- **Interpret the context** - understand vernacular forms and the characteristic grain of regional settlements to inspire new contextual masterplans and create a strong narrative of place.

- **Respect boundaries** - existing and new settlement edges and boundaries should be understood and clearly defined to prevent urban sprawl.

- **Celebrate thresholds** - use architecture and landscape to mark the transition between distinctive character areas.

- **Reinvent traditional building forms** - take inspiration from the local vernacular where appropriate while inventing contemporary typologies for modern lifestyles.

By designing people-friendly streets and open spaces

- **Make it green and keep it green** - allow plants, trees and landscape to permeate streets and open spaces. Planting provides shade, improves air quality and enhances the visual appeal of our streets, especially through seasonal change.

- **Create connected neighbourhoods** - accessible neighbourhoods, with connections to local footpaths and cycle routes, enable easier access to local facilities and open spaces, promoting healthier less car-dependent lifestyles.

- **Recapture the streets for people, not just cars** - create safe appealing spaces where planting, trees, neighbourly interaction and doorstep play can flourish, and where natural surveillance will deter anti-social behaviour.

- **Banish the clutter** - provide discrete and convenient places for car parking, cycle and refuse storage, mechanical and electrical kit, preferably on-plot and away from the street front.

- **Use open space as a community focus** - locate shared parks and gardens at the heart of a neighbourhood and encourage people to participate in their design and management.

- **Plan for the long-term to foster a sense of community** - use robust materials and planting that can survive and flourish. Create spaces that people enjoy and care about - that way, they will treat them better.

By crafting modern houses that feel like home

- **Create homes that 'feel like home'** - the moment they cross the threshold people should imagine themselves happily living in a new home.

- **Maximise light and space** - emulate the best of popular period properties with generous floor to ceiling heights and large windows, combined with modern comfort and energy efficiency.

- **Design for flexible living** - layouts should reflect 21st century lifestyles and accommodate changing demographics including the boomerang generation, home-working and caring for the elderly.

- **Embrace modernity while learning from the past** - new homes should adopt modern ways of making and digital crafts, while taking cues from our collective memory of 'home': so, traditional materials, domestic roof forms and a welcoming threshold.

By 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.

CASE STUDIES

We have selected 15 case studies featuring projects which illustrate some or all of the issues and themes in our report. All but one are completed and occupied.

They range in size from just 25 to over 650 homes, and they point the way towards creating good homes and places at a much larger scale. Within the chapters there are examples of masterplans for 1,000 homes and more, which show how to scale up the approach to placemaking shown in the case studies.

We acknowledge that most of our case studies are in relatively high value areas in London, the South-East and Cambridge, although we also have examples in the West Country, Midlands and Scotland. We understand that financial viability in lower value areas is very challenging, but we also know that good outcomes can be achieved through holistic design (thinking about the 'means of production' from the outset) and the intelligent application of funds towards the things which people really value: comfort, convenience and beauty.

The case study projects have been endorsed by numerous design award juries, and, more importantly, they are popular with the people who live in and around them.

The Avenue, Saffron Walden

The 21st century period home: how to integrate modern houses into a traditional setting

The Avenue provides buyers with a wide choice of characterful contemporary homes, in contrast to the more generic products offered by competing developments. The developer's brief required each home to be individually designed to best suit its own plot – and each home to feel unique.

This exemplary development introduces 76 new homes into a conservation area in a historic market town and preserves a lime-tree avenue and a listed water tower. The Avenue responds sensitively to this semi-rural landscape, taking its cue from the fabric and grain of Saffron Walden and the Essex countryside. The palette of materials is also characteristic of traditional buildings in Essex, but the detailing is contemporary.

The challenge was to deliver a viable development without destroying what was special about the mature landscaped setting. An early decision to optimise the intrinsic qualities of the site – and retain as many as possible of the 150 mature trees – determined the site planning. The restored avenue of lime trees has since become a popular public route to the town centre for local residents.

Frequent criticism of suburban development is the repetitive use of standard house-types, which have little or nothing to do with their context. Here, each home has been designed in response to its unique location, aspect and potential views. Creative repetition of a 'kit of parts' allows each house to achieve individuality, without compromising commercial viability and construction efficiency. The mix of traditional materials – brick, black weatherboards, render and shingle – expresses individual plots within the cluster.

How did the process lead to a successful outcome?

Designing for people
A previous application by others had raised many local objections and had been rejected, The new application was preceded by extensive public consultation, winning widespread support, especially for retention of the lime avenue and creation of an improved public route through the site.

Sales were strong despite a dip in the market. Customers responded well to the combination of bright open interiors, modern detailing and traditional materials, and to each house offering something special.

Post-occupancy surveys show a high level of satisfaction, and the development today is well cared for.

Landownership and management
This was a fund-raising land disposal by the adjoining school, which selected a development partner through a competitive design and development competition with an emphasis on collaborative working.

The streets and courtyards will remain privately owned and are maintained by a management company through the service charge.

Planning
The scheme complies with the Essex Design Guide, but initially there was some resistance to departures from conventional interpretations of the guide. The application eventually received unanimous approval of the planning committee, with support from the tree and conservation officers.

Designing for construction
The architect provided a complete service from concept to completion, working with the developer's sales and construction teams at all stages to create an innovative but easily buildable product.

Architect	Pollard Thomas Edwards
Client	Hill
Homes per hectare	29
Site area/hectare	2.9 of which 2.6 is developed
Number of homes	76
Car parking spaces	149
Housing typologies	Terraced, linked-detached, cortyard houses apartments for older people
Range of storeys	3

Cane Hill Park, Coulsdon

Sensitive responses to topography, existing trees and views from the surroundings were crucial elements in creating this successful and 'distinctively local' neighbourhood in Surrey Green Belt

At Cane Hill Park, a unique historic site was bought back into use, opening up access to an area of underused Green Belt. The development shows how common typologies of home can be carefully composed together and varied by location to tailor a unique response.

Cane Hill Park celebrates the natural and historic character of its Green Belt site by creating a network of new parks and improving access to countryside for the community. The new neighbourhood is well located, with Coulsdon South station a short walk away, offering access to central London in half an hour. Coulsdon Town Centre sits immediately to the north of the new neighbourhood and is an attractive high street that is being supported by the arrival of new residents.

Two retained hospital buildings, a chapel and water tower, are at the heart of defining the place, providing focal points that reference the local heritage, aiding navigation and echoing the site's historic radial

composition in a village green at the crown of Cane Hill. Starting from the centre the phasing is designed to connect the top and bottom of the site with a new 'Ridgeway Park' which retains a woodland belt and links Coulsdon High Street into the new village green.

A range of new home typologies for use across London was developed by HTA Design in collaboration with Barratt's national technical team. From these 'chassis', variants were produced to respond to unique site conditions and opportunities - corner frontages, crescents, varied roof forms, bay windows and balconies carefully located to capture key vistas. This approach evolved through the use of a full three-dimensional model where each home's relationship with existing trees and the complex site contours could be carefully refined.

Cane Hill Park explores how new neighbourhoods can integrate with their context, create a diverse range of homes that share a common basis and embrace the opportunities of a mature landscape with rich heritage.

How did the process lead to a successful outcome?

Designing for people
Representatives from the local community were part of the selection panel that interviewed developers and we met with them throughout the design development to explain how the design had evolved. Two of these community representatives went on to speak in support of the development at the planning committee.

The homes have proved popular with purchasers with the first release of homes selling out rapidly.

Landownership and management
The land was acquired by Barratt through a bid to the GLA. The land had originally been acquired by the HCA and much of the demolition and remediation had already been completed by the HCA prior to Barratt's successful bid to develop the site. Together, Barratt, Ward Homes and Optivo have created the Cane Hill Park Management company which is responsible for managing the extensive framework of open spaces.

Planning
The development is the culmination of a 20-year process since the site was identified as part of Croydon's UDP. A masterplan for the wider area was prepared by the London Borough of Croydon prior to the outline planning application. The design team for Cane Hill Park contributed to the development of the wider masterplan. Subsequently a hybrid application was prepared which was taken through an extensive pre-application review process with officers. The detail of the first phase was combined with a comprehensive design code for the subsequent phases which gave the London Borough of Croydon confidence in the delivery of the new neighbourhood as envisaged.

Designing for construction
HTA designed a range of details for all the critical elements of the façade which set the design ambition for the site for the working drawing architects. HTA returned to the site regularly to review where designs had been successful and where there was scope to further improve aspects of both the design and the delivery in subsequent phases.

Architect	HTA Design
Client	Barratt Southern Counties / Ward Homes
Homes per hectare	29 average
Site area/hectare	79 of which 23 is developed
Number of homes	677
Parking spaces	1,366 residential spaces
Storeys	2-3
Open space/hectare	8.5

Ninewells, Cambridge

Set in a rural-suburban landscape on the southern edge of Cambridge, this dense mixed community integrates students, small and large households and retired residents into a rich and open landscaped setting

The vision for Ninewells was to develop a unique, contextual design that respects the character of its location and creates a range of homes that all enjoy the great views and connections to the wider countryside.

The scheme, situated against open fields and enjoying views towards the Gog Magog Hills, creates a new southern edge to the city of Cambridge.

Along the southern edge, more rural boundary building forms and materials reflect typical, traditional agricultural buildings such as timber clad, gable ended barns. These barn-inspired homes allow open space and landscape to flow between them into the scheme.

By contrast, to the north lie the urban forms of Addenbrooke's Hospital. This transition in character is reflected in the design, with a more contemporary, ordered and formal urban architectural character along the northern boundary.

The desire to enable open space and landscape to flow into and up to the new homes required a different approach to parking, access and servicing of the new homes. Rear mews streets were created to provide rear access for parking and servicing, which enables these homes to look outwards and connect directly to the open landscape without needing to be separated by a road.

Pedestrian and cycle connections provide links with the local network of cycle routes. These create a connected development that presents an open, accessible feel to the surrounding area.

The result is a scheme that delivers a range of contemporary homes in a rich, safe and beautiful landscaped setting that is sensitive to its unique setting.

How did the process lead to a successful outcome?

Designing for people
The design was developed through a series of public exhibitions at each stage, from the initial site allocation, through outline planning and finally by reserved matters approval.

Buyers have preferred the more innovative and larger homes with multi-level external terraces and bonus rooms to the smaller, more conventional homes.

Landownership and management
The land was bought directly from a private owner.

The roads, pathways and accessible open spaces are adopted by the local authority. Only the drainage swales and ponds remain privately owned and maintained.

Planning
The land was initially allocated for housing as part of a wider extensive expansion planned for Cambridge known as the southern fringe sites.

The local authority was very engaged and demanding of a high quality design approach which included regular review by their independent design review panel.

Designing for construction
The design was delivered by Hill Partnerships under a management contract, with PRP Architects appointed from concept to completion enabling constant review and checking against the initial concept at all stages.

Architect	PRP
Client	Joint venture between Hill Partnerships and Bedfordshire Pilgrims Housing Association
Homes per hectare	35
Site area/hectare	7.7
Number of homes	270 homes and 100 student bedrooms
Parking spaces	353
Community and commercial space	0
Housing typologies	circa 25
Storeys	2-4

Horsted Park, Chatham

A suburban mixed-tenure neighbourhood on an escarpment edge, with a strong built-form-to-landscape relationship

The masterplan for this unique suburban edge site refers to historic precedents including the adjoining town of Rochester, European examples of rural settlement edges, Kent's very particular farmyard clusters and its village structures. These informed the shared surface mews courts that provide the public realm armature across the masterplan, while the very distinct silhouettes that can be seen in both the fortified hill towns of France and Italy inspire the threshold escarpment edge.

Set in a suburban location to the south of the historic centre of Rochester and located on the edge of an escarpment landscape with dramatic views across the valley, Horsted Park is a mixed-tenure neighbourhood of around 340 new homes.

Drawing inspiration from the area's local heritage, the spatial composition of the new neighbourhood explores the variation, intimacy and suspense often found in the historic form of surrounding Kentish villages and farmstead enclosures.

Influenced by these contextual references, the design successfully creates an environment with a unique sense of place. In response to the site's semi-rural setting, the opportunity was taken to develop a series of new house types which reference the rural vernacular of Kent's farmsteads. Clusters of detached, semi-detached and terraced homes are arranged as a series of farmyard courts with fingers of accessible parkland, defining the edge and interface between each cluster.

Two-, three- and four-bedroom houses with walled gardens located to one side (instead of the ubiquitous and conventional front and rear garden configuration) take advantage of the southerly orientation, providing each home with a direct aspect into the linear fingers of accessible landscape and a frontage onto the shared surface 'farmstead' court.

This site can be characterised by its dramatic topography: a level plateau on the crest of the hill, falling away steeply towards an escarpment edge.

Single storey garage link delivers sense of enclosure to 'Yard'

Sheltered 'yard' shared surface communal court

Masonry wall at ground form a continuous perimeter boundary to clustered courtyards

Private amenity spaces trapped between dwellings to form 'walled' gardens

Parking spaces distributed around neighbourhood clusters

'Marker home' terminates vista along central lane

How did the process lead to a successful outcome?

Designing for people
Exhibitions and consultations were undertaken with the local community to help inform the design.

The homes sold very well. Very positive resident feedback can be seen in the film commissioned by Design for Homes in 2018.

Landownership and management
The land was a brownfield site acquired from the local authority.

Designing for construction
The development was procured and constructed by the same housebuilder.

The design team was retained throughout the entire design and construction process, so the original vision was largely delivered.

Architect	Proctor & Matthews Architects
Client	Countryside Properties
Homes per hectare	38
Site area/hectare	4.1
Number of homes	154 (phase 1)
Parking spaces	292
Community and commercial space	Extra-care accommodation ~106 sqm
Housing typologies	Detached, semi-detached, terrace houses, apartments
Storeys	2-3

Hanham Hall, Bristol

How we can meet the crucial challenge for 21st century homes of reducing our impact on the environment while creating attractive places to live

Hanham Hall is a new neighbourhood which knits development adjacent to a listed building, connects the community to the surrounding Green Belt and provides homes which are zero carbon. It brings heritage back into use and sustains it into the future.

Hanham Hall is new mixed-use neighbourhood which has been created through the regeneration and restoration of a Grade-II Listed building and its grounds. The design opens up the site to the public with generous park land extending out into the adjacent Green Belt. Located in South Gloucestershire, 7 km from the centre of Bristol, the site is bordered by suburban housing.

Central to the vision of the development is the restored Hanham Hall, which provides the site with an important sense of identity and history. Its reinvention has brought to the community a crèche, cafe, community hall and varied sizes of small to medium office spaces. The composition of the streets emerges from this unique piece of heritage to respond to the site's characteristics and constraints.

From the Hall run two green corridors connecting it directly outwards. To the east, an informal series of spaces emerge from the original farm buildings of the hall. To the south, the more formal and grand frontage of the hall is framed by a orthogonal garden square.

The site was the first in the government's 'Carbon Challenge' programme and all of the homes are zero carbon. The design philosophy is to create spaces that support and encourage more communal and sustainable ways of living. Generous shared facilities include orchards, allotments, communal greenhouses, play areas and quiet contemplative gardens. The design of the homes is bespoke and seeks to reflect the sustainability ambitions. Homes maximise daylight with vaulted ceilings and dual aspect living over two floors. Large shading verandas and shutters mean the homes are well protected from overheating, and create an 'indoor-outdoor' space that encourages enjoyment of the generous open space, enables interaction with neighbours and gives the community its distinctive identity.

How did the process lead to a successful outcome?

Designing for people
The homes have proved very popular, particularly among those not usually attracted to new build homes. Many cited the environmental credentials and reduced running costs as reasons for purchasing. In post-occupancy assessments, 95 per cent said they appreciated the beauty of their surroundings. The community are active, running their own Facebook page and staging regular events including summer fairs. Much use is made of the community room in the restored hall. The parish council also use the hall for committee meetings.

Landownership and management
The land was acquired by Barratt through a bid process to the HCA under its pioneering Carbon Challenge programme. The development is now managed by a Community Interest Company (CIC) which was set up in partnership between Barratt and the housing association Sovereign. The CIC continues to work with the Hanham Hall Residents Group to manage the evolution of the neighbourhood.

Planning
The site was allocated for housing by South Gloucestershire. A number of other planning applications had come forward for the site prior to the HCA competition, including one approval for the site, so the principle of development had been agreed. However, the impact on the setting of the hall remained a critical concern and the delivered proposals reinstate it as a community use without seeking to add housing within the listed hall.

Designing for construction
HTA Design was retained throughout the detailed design and helped prepare a number of prototypes, both to test the innovative construction and the performance. Kingspan was extensively involved from the competition stage through to completion as were many of the design team. The HCA was actively involved in ensuring the development delivered the original vision. As a result of the collaboration, the homes have performed better than their design predicted.

Architect	HTA Design
Client	Barratt Bristol
Homes per hectare	33
Site area/hectare	9 of which 3.8 ha is developed
Number of homes	187
Parking spaces	252 residential spaces
Storeys	2-3
Open space/ hectare	4.4

Mountfield Park, Canterbury

The first phase of major southern expansion to Canterbury deriving its plan and aesthetic from Kentish local landscape patterns and rural settlements

Designing for people
Extensive consultation was conducted with the local community and resident associations.

Landownership and management
The land forms part of the housing allocation requirement in Canterbury's local plan and was acquired from local farmers.

The formulation of a management trust is currently being considered.

Designing for construction
The developer wishes to retain the concept design team through all stages of the project from sketch proposals through to completion.

The distinctive man-made landscapes in this part of Kent feature orchards and hop fields imposing orthogonal grids across undulating fields. Equally, Kent's villages and market towns provide a specific morphology with steeply pitched red tile roof forms held together in clusters by linking gardens walls. Tall chimneys provide punctuations to built form with a generally horizontal emphasis, and settlement character. Studies of all these local landscapes defining the characteristics of the built form informed the design evolution at Mountfield Park.

Mountfield Park on the southern edge of Canterbury will be a significant enlargement of the city. This had been masterplanned by David Lock Associates. The first phase of 140 homes - which has currently a local authority resolution to grant planning permission - is intended as a design benchmark for the 4,000 homes that will eventually follow.

The formal composition of residential clusters, apartment blocks and open spaces is driven by the site's iconic view of Canterbury Cathedral. This is used to establish a structured view line across the site in which a series of open spaces are arranged, including

a principal square. A number of permeable pedestrian/ cycle routes across the site not only connect with wider existing and planned neighbourhoods, but also help to reinforce strategic routes to particular points of interest.

The first phase comprises five residential ensembles arranged to resemble the 'gridded patchwork' structure of surrounding hop fields and fruit orchards. Building on this concept, a typological narrative of shelter and organisation is established through the composition of residential clusters. Configured as a series of courts made up of inter-connected courtyard houses, each cluster has its own character and identity.

Through the careful arrangement of visual links and relationship between private and shared spaces, this typology also sets a framework for a more intimate sense of community amongst its residents within the wider scheme. At the heart of each cluster is an orchard landscape, provided as a focal point. In response to the site's undulating topography, each cluster is expressed as a series of stepped terraces.

Architect	Proctor & Matthews Architects
Client	Corinthian Land
Homes per hectare	28
Site area/hectare	0.5
Number of homes	140
Parking spaces	250 spaces
Community and commercial space	Community facilities and restaurant
Housing typologies	Detached, semi-detached, apartments
Storeys	2-6

New Ground, High Barnet

Co-housing for our ageing population: how a determined group of older women have joined forces to shape their own futures

With self-build now on the government's agenda, co-housing (for all generations) could play a significant role in housing delivery. Its supporters are, by definition, community-minded and proactive; even small groups within large new developments could help transform estates into communities.

The members of Older Women's Cohousing (OWCH) have been working together for many years, pioneering the idea of a mutually supportive community in later life. A mix of homeowners and social renters, some still working and others long retired, the women rejected conventional models of supported housing.

Their brief was very clear: self-contained sustainable homes, with additional shared facilities that create a sense of community. The collaborative design process was a learning exercise in understanding

the realities of planning and building. The architects worked with the group to evolve a layout focused around shared facilities and gardens, which also gave every home a good outlook and plenty of sunlight.

New Ground contains 25 customised homes and a shared 'co-house' clustered around a walled garden. The shared spaces are the hub of the community: meeting room, kitchen and generous dining area, complemented by practical amenities like a laundry and mobility scooter store, plus a guest room that doubles as a quieter meeting space. The scheme has its own distinctive character, while sitting comfortably in a mixed context of Victorian and modern buildings.

How did the process lead to a successful outcome?

Designing for people
New Ground is the product of a collaborative design process led by the architects and enabling the future occupiers to design their own homes and the shared spaces.

The homes were pre-allocated to the co-housing group members, and the price was set to cover the development cost rather than being based on market value.

There is extensive and positive informal feedback, and formal post-occupancy evaluation is being led by the London School of Economics and Lancaster University.

Landownership and management
The land was identified following a 10-year search, and bought on the group's behalf by Hanover Housing Association. With the support of another association, Housing for Women, the place is managed collectively, with cleaning, gardening and basic maintenance being carried out by the group members themselves.

Future change to the place, the occupiers or the management is determined collectively by the group in accordance with its constitution.

Planning
This small infill site was subject to a conventional detailed planning application process including conservation area approval.

Designing for construction
The scheme was built by a design and build contractor selected through a conventional tender process post-planning, with the architects novated to the contractor.

Hanover and the architects supported the co-housing group in realising its original vision through the complex and lengthy planning and construction process.

Architect	Pollard Thomas Edwards
Client	Older Women's CoHousing & Hanover Group
Homes per hectare	77
Site area/hectare	0.32
Number of homes	25
Car parking spaces	9
Community space/hectare	0.04
Housing typologies	flats
Range of storeys	2-3

Kings Weald, Burgess Hill

This landscape-led approach to developing a new neighbourhood revitalises a previous industrial area and creates a characterful and connected local community

A high-quality public realm was developed using the best quality plants and materials to create a beautiful landscape setting for up to 475 homes. There is a clear distinction between public and private domain with a strong landscape structure. Creating pedestrian and cycle connections to Burgess Hill town centre and the adjoining residential areas to the site were key design principles guiding the master plan for this project.

Kings Weald is a mixed use residential-led development of the former Keymer Tile Works, approximately 1 km from the town centre on the eastern fringe of Burgess Hill. A masterplan for up to 475 homes and a mixed-use local centre was granted outline permission in 2010. Three reserved matters applications have subsequently been approved and the site is approaching completion.

The design principles for the masterplan are strongly influenced by the feedback from the significant public consultation as well as the opportunities and constraints and contextual analysis carried out during the development of the masterplan.

These design principles are creating pedestrian and cycle connections to Burgess Hill town centre and the adjoining residential areas to the site; protecting existing ecological habitats; providing a legible urban design strategy with a variety of open spaces with a clear hierarchy of streets and routes within the site; and locating a central square with a mix of uses near the main entrance to provide a new focus for the community

The architecture for the majority of the masterplan area is traditional Victorian vernacular and responds to the historic character of Burgess Hill town centre. The houses have steeply pitched roofs with large sash windows, projecting bays and gabled elements.

How did the process lead to a successful outcome?

Designing for people
The masterplan was developed following significant dialogue with Mid Sussex District Council's Urban Designer, in liaison with officers from the Planning Department. In addition, the direct involvement of the community and stakeholder groups has formed an integral part of the design process.

The first phase has sold in its entirety with strong current sales on the second phase.

Landownership and management
An option agreement was in place prior to the land being acquired following the successful land allocation for residential use. Croudace Homes has established the Kings Weald Management Company, which will be handed over to key stakeholders when construction is complete and the developer withdraws from the site.

Permitted development rights are removed by the planning permission for the entire masterplan area. Any future changes by householders will be controlled through the planning process.

Planning
Following a lengthy planning history, the site was granted outline planning permission in 2010 for the residential-led development of up to 475 dwellings and a mixed-use local centre including retail, healthcare and recreational facilities.

There were extensive pre- and post-application meetings with the local planning authority.

Designing for construction
The entire masterplan area is being developed by Croudace Homes, which is procuring and managing the process in-house. The buildings are all built from traditional brick/block construction.

Architect	PRP
Client	Croudace
Homes per hectare	35
Number of homes	475
Parking spaces	1
Community and commercial space/ hectare	0.1
Housing typologies	70
Storeys	2-4

Polnoon, Eaglesham, East Renfrewshire

A pilot project demonstrating how 21st century placemaking can provide an authentic addition to a protected 18th century listed village with the ambition of creating a conservation area of tomorrow

Sitting on the edge of a Scottish moorland landscape and extending 18th century Eaglesham's historic morphology, the new neighbourhood of Polnoon responds to both the village's distinctive architectural character and the local climate. The new masterplan adjusts standard house types to create a denser urban structure of housing clusters and village streets that provide a sheltered people-friendly public realm.

Initiated and led by the Scottish Government, and housebuilder and developer Mactaggart and Mickel, Polnoon sets out to provide an alternative design response to the volume-housebuilder estate format that is delivered on so many sites of this nature. The objectives were to lift densities within a vibrant public realm and provide a new defined edge to Eaglesham, which borders the adjacent windswept moorland. This is achieved with a new network of streets to the rural edge.

The design rejects the impermeable cul-de-sac arrangement and 'plot-by-plot' approach of many suburban expansions. Instead, it provides a clear hierarchy of shared-surface public realm spaces - streets, lanes, courts and a central square - to create a more pedestrian-friendly environment.

Standard house types were adapted with reference to Eaglesham's historic context. Particular attention has been paid to elevations, gable windows and chimneys to create a dynamic streetscape. These elements animate the street scene and improve natural surveillance. A series of more prominent, carefully-positioned 'marker' homes augments Polnoon's spatial hierarchy and enhances the street townscape.

The scale, proportions and configurations of the houses at Polnoon are designed to reflect those of traditional rural buildings in Scotland. Dwellings are 'stitched' together with garden wall ribbons of differing heights and textures to provide street edge continuity as well as a strong sense of enclosure in some of the more intimate courts. This helps to provide shelter and protection from the extremes of the moorland climate.

Polnoon uses a simple materials palette that offers variety and visual interest. All houses are tied together by masonry plinths, white textured rendered walls and tile roofs. This is similar to the materials used in nearby historic properties. Pigmented render accentuates window surrounds with bands of colour - a contemporary take on a typical Eaglesham window.

How did the process lead to a successful outcome?

Designing for people
Extensive consultation was conducted with the local community and stakeholders. This impacted on decisions concerning inter-neighbourhood vehicular and pedestrian connectivity. The local authority's highways and conservation department was consulted at all stages of the design. The homes sold well during a period when other developments across Scotland suffered from a depressed market.

Landownership and management
All public realm spaces were designed as shared space for adoption by the local authority.

Planning
Part of the development site is within the Eaglesham conservation area.

Designing for construction
The development was procured and constructed by the house builder. The design team devised detail drawings of design elements to assist the post-planning in-house delivery team.

Architect	Proctor & Matthews Architects
Client	Mactaggart & Mickel / Scottish Government
Homes per hectare	22
Site area/hectare	5.6
Number of homes	121
Parking spaces	295
Community and commercial space	Designated play space
Housing typologies	Detached, semi-detached, apartments
Range of storeys	2-4

Upton, Northampton

Modern homes need to be full of light but also highly sustainable. This urban development combines both, thanks to design cross-fertilisation between engineers and architects

To ensure the homes we build today leave a sustainable legacy, they should match the light-filled spatial qualities of period properties while being more comfortable, energy efficient and designed for the variety of modern lifestyles. The development of Site C at the urban extension of Upton outside Northampton was designed through a pioneering collaboration of engineers and architects to find design solutions that address these issues while generating homes that are at once familiar in their form, unique in their appearance and related to the locality.

The Upton development is an exemplar sustainable urban neighbourhood, with multiple different land parcels co-ordinated through a masterplan and a design code. As part of this approach, Site C was identified as the location to explore improving the sustainability of modern homes. The final design shows how sustainability can enhance not just how the homes perform but also impact on how they look and integrate with their setting.

Site C is composed of a mixture of detached and semi-detached villas. They are unified through a shared palette of complementary materials, proportions, roof forms and details, all derived from local studies of traditional house forms. The appearance of the homes took these studies as a starting point and then incorporated a range of measures to help their residents enjoy more sustainable lifestyles.

The site arrangement positions every home with an aspect within 15 degrees of south or west and each is designed with solar gain spaces - either conservatories or living rooms that optimise the benefit of winter solar collection. To avoid overheating in the summer, shading is used to create deep overhanging eaves and cheeks to the gables that frame the balconies, and is combined with internal shades. Natural ventilation was maximised through double height spaces and roof windows. Building materials were selected for their sustainability with other measures including green roofs, rainwater collection and high insulation combining to deliver a development which set the standard for integrating sustainable measures with their architectural approach.

How did the process lead to a successful outcome?

Designing for people
English Partnerships developed the project through two Enquiry-by-Design events, with major input from The Prince's Foundation and EDAW. This process offered extensive opportunity for the surrounding community and stakeholders to influence the design of the area.

Landownership and management
The land was acquired by David Wilson Homes through a competition held by English Partnerships (now part of Homes England). There was an extensive review period ensuring that the design fulfilled their criteria. An important part of this was ensuring that the open spaces were both effective and well managed. This stewardship has been secured through the Land Trust, a charity committed to the long-term sustainable management of open space for community benefit.

Planning
The land had been through an extensive process of planning and allocation. This was captured in the design codes for the site and wider area, which were both extensive. This meant that the process of engagement with officers and English Partnerships largely centred on how we had interpreted the design codes for compliance and also how we would sometimes exceed the code to achieve high quality. It was helpful that many of the complex negotiations around the detail of a place had been agreed previously.

Designing for construction
Adherence to the design code ensured the project remained true to the original masterplan vision at every phase of delivery. HTA was retained for the detailed design stages alongside many of the other design consultants, which helped particularly with the sustainable energy and overheating strategy.

Architect	HTA Design
Client	David Wilson Homes
Homes per hectare	34.5
Site area/hectare	0.87
Number of homes	30
Parking spaces	45
Storeys	2-3

Beechwood West, Basildon

Custom-build family houses: how buyers can create their own homes from one million potential design combinations

Why should the opportunity to design your own home be restricted to the wealthy in Britain? This project enables people on ordinary incomes to configure their own homes from a huge menu of choices, including external form and material, so that the character of the place is built up through the self-expression of each household. The homes are then built to order in the factory and delivered to site.

Beechwood West is a new neighbourhood of over 250 family houses for sale to people on moderate incomes. Factory-built modular technology offers an outstanding range of consumer choice, creating unique homes, designed by customers to suit their requirements. The first commissioned homes were delivered in 2018, pre-constructed in cross-laminated timber (CLT), providing solidity, quality, environmental benefits and time savings.

Buyers first select their plot and then create their new homes using specialist software. Starting with the basics - number of bedrooms, arrangement of the downstairs and upstairs plans and the level of specification - residents can then choose from a palette of external finishes for walls, roofs and windows and can add bays, conservatories and roof extensions.

A custom-build approach requires the materials proposed to be visually cohesive and completely interchangeable. Drawing its inspiration from the best of British suburban housing, Beechwood West offers 21st century homes that express the needs and aspirations of their owners.

Completed show houses

Create your own home by using the specialist configurator

Modules under construction in the factory

Modules being delivered to site

How did the process lead to a successful outcome?

Designing for people
The design team held a series of pre-planning community events for Beechwood West, which was part of a wider regeneration process involving many years of community engagement.

The homes are selling strongly, and buyers are highly engaged by the customisation process enabling them to shape their own design.

Landownership and management
The former education site was transferred to Swan by the local authority with funding from the GLA

Planning
Basildon Council planners were involved in the selection of the architect, and the design evolved through a series of pre-application workshops.

The outline planning permission includes prior approval for the menu of house types and a streamlined process to obtain reserved matters approval for each plot once the customer has selected their preferred design.

Designing for construction
The homes are pre-fabricated in a local factory set up by Swan NuLiving to deliver this project using its own in-house team.

The project exemplifies the concept of housing design as product design, with total integration of concept and means of production, and the planning architect simultaneously detailing the prototype designs.

Architect	Pollard Thomas Edwards
Client	Swan Housing Association
Homes per hectare	38.5
Site area/hectare	6.89 of which 6.5 is developed
Number of homes	251
Car parking spaces	565
Housing typologies	detached, semi-detached, terraced and mews houses
Range of storeys	2-3

Windlebrook Park, Longcross, Surrey

Rural character can be reflected in large, closely-built family homes that use land efficiently while sitting comfortably within the open Green Belt setting

Windlebrook Park is a new 'farmyard' of contemporary barn-style homes that sit within and connect to their rural countryside setting. The development illustrates how contextual design can enable very large homes to be delivered more densely than normal for homes of this scale while respecting the surrounding rural character and Green Belt setting.

Situated off a long country road flanked by trees, the character of the site is a mixture of mature woodland, tree belts and fields with occasional individual homes separated by large tracts of land. The barn-inspired homes reflect a group of gable-ended farm buildings of different sizes and shapes with traditional barn materials.

Internally, the new barns reflect many of the characteristics of converted barns. Large double or triple height entrance spaces and long views along the linear barn buildings connect one end of the home to the other. Views through the homes are aligned

to windows; and each window within the homes is located to enhance the connection between these internal spaces and the surrounding countryside. This outlook also enhances the natural surveillance over the shared 'farmyard' to enhance a sense of safety and security in what is a remote location.

The result is a collection of high value, densely planned contemporary homes that respect and enhance their traditional rural setting. Designed for modern households, the homes are light and bright with an open aspect connecting inside to outside. Each home combines with the others to create a small cohesive group of linked buildings with a shared identity and sense of community.

How did the process lead to a successful outcome?

Designing for people
Each individual home has an identity as part of a collection of buildings. This collective identity was intended to promote a small new community feel to these large family homes. Their remoteness and lack of near neighbours required that this identity be created in its own image rather than deriving from connection to a wider community.

Landownership and management
The Green Belt location required that the new proposals increased the sense of openness and reduced the footprint of built forms to ensure that the rural character of the area was preserved. The land purchased included woodland and open paddock, which is managed by a private company.

Planning
The existing site had several dwellings on it and enjoyed planning consent for a single dwelling. Being remote, there were few local residents to consult. The design was developed through consultation with the local authority to ensure the open and rural Green Belt character of the location was preserved. The local authority was actively engaged throughout the pre-application process in developing the design proposals and welcomed the complementary and contextual approach. The scheme was praised at planning committee for its quality and sensitivity to its setting.

Designing for construction
The design proposals were developed by PRP to planning consent but developed further by others and constructed by an independent contractor. The developer's attention to detail and passion were essential in ensuring the preservation of the quality and original vision of the development.

Architect	PRP
Client	Henley Space
Homes per hectare	1
Site area/hectare	4.4
Number of homes	4
Parking spaces	16
Community and commercial space	0
Housing typologies	3
Storeys	1-2.5

Officers Field, Portland

This redevelopment of an old military base in Dorset shows how a simple range of home designs can be composed and varied to create a sympathetic response to the surroundings and makes the most of a challenging site

New neighbourhoods often need to be created at the fringes of existing communities on undeveloped sites that may have challenging ground conditions. At Officers Field, part of the wider Osprey Quay masterplan, the design of the new homes had to respond to their setting while solving the complexity of the site's topography and irregular shape.

Officers Field is designed to integrate the site with its setting, making the most of views of Chesil Beach. The new homes are part of the wider Osprey Quay regeneration which creates a new mixed-use development on the site of a former naval base, which was historically disconnected from the surrounding area. The combination of steep topography - there is a four-storey level change across the site - and the complex site shape, required a creative approach to the composition of streets and homes to achieve new connections.

A new public square is at the heart of the design with a set of Portland Stone steps opening up

access to the south-east and creating a gateway to playing fields. Landscape and architecture teams collaborated closely to embed the homes in their setting. Local stone weaves through the site and connects buildings to boundary walls, planters and steps in one continuous material.

The houses are designed with split levels to minimise cut and fill by following the existing ground form. Homes range from small terraced homes to larger detached homes in eight basic arrangements, which are then varied in response to their context. Simple gabled forms reflect the popular local vernacular and step up the hillside of Portland to complement the existing houses. These gabled forms are then wrapped by Portland stone 'outbuildings' that twist and turn in response to specific site conditions.

Testament to the first phase's success is that the same team was awarded the second residential phase, which is now on site.

How did the process lead to a successful outcome?

Designing for people
The community was involved in the wider masterplan and a public consultation was held for the reserved matters application. Before completion, the development was used as the sailing village for the 2012 Olympics, and the resulting accessibility meant it was possible for people to view and purchase in advance of completion.

Landownership and management
The land was acquired by ZeroC through a competitive bid process to the South West Regional Development Agency and subsequently managed by the HCA (now Homes England). The open spaces are managed by Weymouth and Portland Borough Council.

Planning
Although won in competition, the design evolved in close collaboration with planning officers at Weymouth and Portland Borough Council, particularly the design and conservation officers. Their input enhanced the scheme by drawing additional routes, including the distinctive central steps, into the design. The appearance of the homes also evolved in this way, and incorporates a range of roof forms and details which are distinctive to the setting including the coursing and design of the Portland Stone.

Designing for construction
HTA Design was novated to Acheson Construction for the detailed design, attending site regularly and working closely with the contractor to see the original competition vision delivered. Part of the process of handing the homes over to the Olympic Games involved a range of adaptations which were designed by HTA to ensure that the homes were delivered as originally intended.

Architect	HTA Design
Client	ZeroC
Homes per hectare	39
Site area/hectare	1.97
Number of homes	77
Parking spaces	118
Storeys	2-4
Open space/hectare	0.86

Woodside Square, Muswell Hill

Placemaking in the suburbs: how older people of all incomes can remain happy, independent and productive in a new multi-generational neighbourhood

Woodside Square is an example of 'designed variety'. Customers can choose from a wide range of new apartments, duplexes and houses or converted homes in three heritage buildings, where every apartment is unique.

New houses and apartments are arranged around an intricate network of streets and garden squares, scaled for people rather than cars (which are mostly parked below ground). A popular new pedestrian route links existing streets to the north with Highgate Wood and the local primary school to the south.

The scheme respects the existing mature planting, the listed and locally listed buildings and the character of the conservation area. Beautiful shared gardens feature outdoor dining tables, allotment spaces, play gardens.

The design was carefully tuned to the local market and needed to provide a return for the site's high value. A relatively high density of 240 habitable rooms per hectare was achieved within strict height limits, and the architectural approach relates closely to the local context.

Intergenerational living is an excellent model for establishing new places. At Woodside Square 70 per cent of the new homes are aimed at active downsizers aged 55 and over, while the edges of the site are lined with terraces of family houses with their gardens backing onto their Edwardian neighbours. Thirty homes were individually designed for members of a co-housing group; sadly the group never occupied them, but have left a legacy of a shared co-house with events space and a guest room for use by the whole community.

How did the process lead to a successful outcome?

Designing for people
A local co-housing group encouraged Hanover to bid to acquire the site from the NHS. The site is closely surrounded by active local residents, and the planning application was preceded by an intensive engagement programme, including numerous meetings with groups and individuals and three major public exhibitions.

The homes have sold steadily, almost entirely to local owner occupiers.

Landownership and management
The land was acquired on the open market from the NHS and in competition with national housebuilders.

The development features extensive public and shared open space, which will remain privately owned, and is managed by Hanover through the service charges. The leases contain covenants requiring permission from the landowner for future alterations.

Planning
The land was sold without planning permission but with the benefit of a planning brief encouraging residential and mixed-use development subject to high design standards.

Designing for construction
Post-planning, the architects prepared a more detailed tender package. Tenderers were invited to bid either for the construction service only or for a combined construction and co-developer role. Hill was selected on the latter basis.

The architects provided a full service from concept to completion, transferring from the original client to the contractor client post-tender.

The contractor-developer had a strong motivation to achieve high quality commensurate with market expectations for this high-value site. In addition to their own quality control processes, Hanover provided a monitoring surveyor and the architect made regular site visits.

Architect	Pollard Thomas Edwards
Client	Hill and Hanover Group
Homes per hectare	67
Site area/hectare	2.38
Number of homes	159
Car parking spaces	100
Community space/hectare	0.016
Housing typologies	apartments, duplexes, townhouses, semi-detached houses
Range of storeys	3–4

Abode, Great Kneighton, Cambridge

This mixed-tenure gateway quarter in a new neighbourhood of Cambridge, delivers a strong identity through a contemporary response to local regional settlements and the city's rich historical context

Both the masterplan and the housing typologies at Great Kneighton refer to the historic evolution of Cambridge. The city's monastic and collegiate courts suggested how the site's rural landscape could be urbanised, while further studies of typical Fenland edge settlements informed the more informal neighbourhood edges.

Abode at Great Kneighton forms the gateway quarter to a new residential and mixed-use neighbourhood of around 2,300 new homes within the southern fringe growth area of Cambridge. The wider neighbourhood provides extensive, accessible green open space, education, sports recreation, health and community and local shopping facilities. The gateway quarter provides 444 new homes, comprising studios, one-, two- and three-bedroom apartments and two- to five-bedroom family houses, together with squares, mews, lanes and parks.

The masterplan gives form to an existing, inherited transport and highways infrastructure of guided busway and major access road leading to the adjacent Addenbrookes Medi-park. A strong sense of arrival at the entrance to the neighbourhood is created by the introduction of a formal structured court (which visually absorbs an existing roundabout and major 'feeder' roads). This configuration makes reference to the historic collegiate and monastic courts of Cambridge. Two five-storey apartments in the 'great court' create pivotal townscape markers announcing the beginning of the central neighbourhood street, and are inspired by the historic collegiate gatehouses of the university colleges.

Beyond the arrival court are a series of residential lanes and mews framed by the three-storey terraces of 'saw-toothed' houses with first floor living rooms and external terraces. These flexible homes have been specifically designed to address the changing needs of 21st century living patterns and combined with 'back-to-back' house plans (small two-bedroom homes conjoined to larger family houses) help to deliver the increased densities required for a contemporary sustainable neighbourhood.

How did the process lead to a successful outcome?

Designing for people
Abode was the first phase of the wider masterplan for Great Kneighton, a new neighbourhood of approximately 2,500 dwellings in Cambridge's southern fringe. There were numerous stakeholder engagement events undertaken during the planning process including public exhibitions, workshops and focus group meetings.

The homes sold very well with Abode outselling other local product.

Very positive feedback concerning the design can be seen in the Design for Homes film that accompanied the project's Housing Design Award in 2015.

Landownership and management
The land was identified by Countryside Properties back in the 1990s and promoted as part of the strategic land allocation for the emerging local plan.

The vast majority of the highways are adopted while landscape spaces are managed by Cambridge City Council.

The council appreciated that the coherence of the design and the public realm required more robust planning control. There are no permitted development rights at Abode and any change is controlled through the planning process.

Planning
The wider masterplan received outline planning with Abode submitted as a reserved matter application. The detailed design of the first phase helped inform the development of the wider design code for the follow-on parcels.

Designing for construction
The scheme was developer-led: the design team had one appointment for all the project stages.

Architect	Proctor & Matthews Architects
Client	Countryside Properties
Homes per hectare	44
Site area/hectare	9.2
Number of homes	308 (phase 1) 136 (phase 2)
Parking spaces	463 (phase 1); 217 (phase 2); 680 total
Community and commercial space	Primary school and community garden
Housing typologies	Detached, semi-detached, terrace houses, maisonettes, apartments
Storeys	2-5

Four architectural practices

This report is the product of collaboration between four architectural practices, specialising in the design and delivery of residential and mixed-use neighbourhoods: HTA Design, Pollard Thomas Edwards (PTE), PRP and Proctor & Matthews Architects.

We have been at the forefront of housing debate, design and delivery for 40 years or more, and are currently delivering a significant number of new homes in England. We are therefore able to take a long view, and to bring experience from across the whole spectrum of housing by type, location and tenure. We are creating homes for all sorts of people: young and old, wealthy and poor, singles and families. Our regeneration work, engaging with local people, has given us particular insights into what has worked – and failed to work – in the past.

Our case studies include projects for housebuilders, landowners, communities, local authorities, and cross-sector partnerships. They include higher and lower value areas, although we acknowledge that we show more of the former than the latter, and we understand the challenge of achieving quality on low budgets. Our guidance is intended to be universal, and not confined to the more generously funded developments.

Why collaborate?

Although we are competitors, we also recognise the benefits of collaboration when it comes to understanding and influencing the wider context in which we operate. We therefore meet regularly to discuss current issues in relation to housing and place-making, and the way they are shaped by the pull of market and regulatory forces.

With a wide range of clients and huge collective experience, embodied in our over 600 combined staff, we find that we can bring knowledge and insight to contemporary issues, and we are keen to share that with the wider community of developers, local authorities, practitioners and politicians. We don't agree about everything, and we bring four different voices to each debate, but we typically discover a high degree of consensus about what are the problems and what might be the solutions.

We also collaborate, individually and collectively, with other organisations such as the Housing Forum, Future of London, NHBC, RIBA, Design for Homes and New London Architecture. Members of our practices have participated in the Housing Standards Review, undertaken research for government and many other national organisations, written numerous design guides and published articles, papers and books about housing.

Some of our collective work to date

A related group (HTA, Pollard Thomas Edwards, PRP and Levitt Bernstein) has produced a number of reports and discussion papers including:

- *Altered Estates: how to reconcile competing interests in estate regeneration*
- *Superdensity: The Sequel Recommendations for Living at Superdensity*
- *Space Benchmarking: Helping Consumers to Make Informed Choices about Homes to Buy and Rent*
- *Yes! In our backyard. Reflections from 30 years of experience of community architecture on how Localism can be made to work*
- *Red Tape Challenge and Innovation in Housing*
- *Bonfire of the Regulations - Rights to Light*
- *Home Performance Labelling*

Awards

The Avenue, Saffron Walden
— RIBA National Award 2016
— RIBA East Regional Award 2016
— Housing Design Awards 2015
— Civic Trust Awards 2015: *Commendation*
— What House Awards 2014: *Gold,
Best Development*
— What House Awards 2014: *Silver, Best Exterior*
— Sunday Times British Homes Award 2014:
Commendation, Development of the Year
— The Housebuilder Awards 2014: *Commendation,
Best design for three storeys or fewer*
— Housing Design Awards 2011
— Placemaking Award: *Commendation,
Design Excellence 2015*

Cane Hill Park, Coulsdon
— Housing Design Awards 2017: *Winner,
Graham Pye Award*
— International Property Awards - UK 2017:
Winner, Best Residential Development Surrey

Ninewells, Cambridge
— What House Awards 2016: *Winner,
Best Development*
— What House Awards 2016: *Winner, Best House*
— What House Awards 2016: *High Commendation,
Best design for three storeys or fewer*
— London Evening Standard New Homes
Awards 2016
— Best Out-of-London Home: *Winner of Best
Out-of-London Home by a large-scale developer:
Ninewells, Cambridge by Hill Residential
(Bell School)*

Horsted Park, Chatham
— Housing Design Awards 2014
— Building Awards 2013:
Best Housing Development
— Brick Awards 2013: *Best Housing Project*

Hanham Hall, Bristol
— RTPI Planning Excellence Awards 2015: *Winner,
Excellence in Planning for the Natural Environment*
— Inside Housing Top 60 Developments Awards 2015:
Winner, Sustainable Housing Project of the Year
— NHBC Quality Awards 2015: *Winner, Pride in the
Job. Excellence in On-site Management*
— Housing Design Awards 2014: *Winner, Richard
Fielden Award for Best Affordable Housing*
— What House Awards 2014: *Winner,
Best External Appearance*
— What House Awards 2014: *Winner,
Best Sustainable Development*
— First time Buyer Awards 2014: *Winner,
Large Development*
— British Homes Awards [Daily Telegraph] 2010:
Winner, Housing Project of the Year
— National Urban Design Group Project Awards
2010: *Winner*

Mountfield Park, Canterbury
— Housing Design Awards 2017:
Best New Neighbourhood

New Ground, High Barnet
— Building Award 2017: *Small Housing Project
of the Year*
— Inside Housing Development Award 2017:
*Best older people's housing development
(under 100 homes)*
— Sunday Times British Homes Award 2017:
Community Living Award
— Housing Design Custom-build Award 2017
— European Collaborative Housing Award 2017
— Housing Design Overall Winner 2017
— Evening Standard New Homes Award 2017:
Best Small Development
— Build it Award 2017: *Best Collective*
— Housing Design Project Award 2016

Polnoon, Eaglesham, East Renfrewshire
— Saltire Society Housing Design Award 2016:
Innovation in Housing
— Homes for Scotland Awards 2014:
Best Medium Development

Upton, Northampton
— Housing Design Awards 2007: *Winner,
Best Project*
— The Mail on Sunday British Homes Awards 2007:
*Innovation Award for Building Technology,
Commendation*
— The Mail on Sunday National Homebuilder
Design Awards 2006: *Best Housing Project
of the Year, Commendation*

Beechwood West, Basildon
— Planning Award 2018: *Award for planning for
increased housing delivery*
— Inside Housing Development Award 2017: *Best
Approach to Modular Construction*
— National Housing Award 2017: *Best Scheme
in Planning, Highly Commended*

Officers Field, Portland
— Civic Trust Awards 2014: *Winner,
Regional & National* - Osprey Quay
— RIBA Awards 2014:
Winner, Regional/National - Osprey Quay
— Building Awards 2012:
Winner, Housing Project of the Year – Osprey Quay
— Housing Design Awards 2012:
Winner, Supreme Award - Osprey Quay
— Housing Design Awards 2012: *Winner,
The Graham Pye Award for the Best Place for
Family Life - Osprey Quay*
— Housing Design Awards 2012:
*Winner, - The Richard Feilden Award for Best
Affordable Housing - Osprey Quay*
— RICS Awards 2014: *Winner, Design through
Innovation & Residential - Osprey Quay*
— Architecture Awards 2017: *Winner, Best Urban
Regeneration Specialists - UK & Best Dorset
Sustainable Homes Project:
Osprey Quay Osprey Quay*

Woodside Square, Muswell Hill
— Haringey Design Award 2018: *Best urban design*
— Housebuilder Awards 2018: *Best design for three
storeys or fewer*
— Sunday Times British Homes Award 2018:
*High Commendation, Development of the year
(more than 100 homes)*
— What House Awards 2018: *Silver,
Best development*
— What House Awards 2018: *Bronze, Best house*
— What House Awards 2017: *Best retirement
development*
— Haringey Design Award 2018: *Best urban design*
— Housebuilder Awards 2018: *Best design for three
storeys or fewer*
— Sunday Times British Homes Award 2018:
Commendation, Development of the year

Abode, Great Kneighton, Cambridge
— RIBA National Award 2015
— RIBA East Regional Award 2015
— RIBA East 2015, *Building of the Year*
— Civic Trust Awards 2015:
National Panel Special Award
— Cambridge Design and Construction Award 2014
— Brick Awards 2014: *Best Housing Development*
— The Sunday Times British Homes Awards 2014:
Development of the Year
— Housing Design Awards 2014: *Supreme Winner*
— Housing Design Awards 2014: *Graham Pye Award*
— Housing Design Awards 2012: *Project Winner*