



Campaign to Protect  
Rural England

**A CPRE report**

# Family Housing – The Power of Concentration



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# Executive summary

How to provide good quality, attractive homes for families with children in urban areas while still making efficient use of land and sustaining local services and amenities.

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Neither qualifying for social rented accommodation nor able to buy unassisted at stratospheric local prices, young families on moderate incomes are continually forced out of London in search of housing they can afford.

This process has a number of damaging effects. First, it polarises the capital – creating a city of the very rich and very poor. Second, it hurts London financially – the erstwhile Londoners typically become commuters but spend most of their money close to their new homes. And third, it puts enormous pressure for housing and infrastructure on precious countryside in south-east England.

If more housing of the right kind was available in London, fewer families would choose to leave. But what is housing of the right kind? It must be reasonably priced, perhaps ‘intermediate’ (shared ownership) housing. And, crucially, it must be of a relatively high density, both to conserve space and to ensure the viability of public transport and local shops and services.

Though planning policy is now shifting in favour of higher densities, the public in general are still sceptical that attractive housing can be built at a significantly higher concentration than the suburban norm of about 30 dwellings per hectare (dph). This poor reputation is predominantly thanks to a variety of infamous developments in recent decades, such as the residential tower blocks of the 1960s and ‘70s. In fact, the most serious problems with these developments resulted not from their dwelling densities – which compared approximately with the streets and squares that they replaced – but

from shortcomings in design, location or management.

The popularity of Georgian and Victorian squares – at about 80dph – shows that higher-density family housing can be extremely desirable. Using seven case studies from around the country, this report demonstrates that good-quality, desirable family homes with gardens and communal green areas can be provided in urban areas at over 50dph, with public transport in easy walking distance of every dwelling.

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## The case studies

We have defined ‘family housing’ as having three or more bedrooms and bed spaces, as well as direct access to a private garden of at least 48m<sup>2</sup>. While we have not assumed that family homes necessarily need their own dedicated parking space, we recognise that car parking is likely to be a major issue for prospective residents, and have included in our case studies the presence of on-street parking, car clubs and secure parking nearby.

50 dwellings per hectare is used as a benchmark density figure because it is calculated to be the lowest concentration at which a viable regional transport link within 10 minutes walk of each home can be sustained. In his introduction to the case studies, Sir Richard MacCormac of MJP Architects writes: *‘A theoretical site density of 50dph... allows, for example, a terraced house with a frontage of 6m and a depth of 10m having a 6m-deep garden/parking area to the front and a 10m rear garden. At two-storeys, such*

*a house can comfortably accommodate three bedrooms or, at three-storeys, four bedrooms and a second bathroom.'*

The report considers open space – both private and public – as highly important for families with children. We demonstrate that it is possible to achieve a gross density of 50dph throughout a development while keeping 3.5% of the gross area as open green space. Following the Georgian and Victorian practice of enclosing shared green space in terraced squares is one of the best ways of achieving this.

*Family Housing – The Power of Concentration* shows that higher-density family house building is vital for rebalancing London's housing stock, stopping the rot of ghettoisation, reinvigorating public transport and local services and giving some desperately needed breathing space to the natural environment of the South East. As our report demonstrates, established design expertise exists to do this – it should now be applied much more widely across the capital.

*Staiths South Bank  
(Gateshead) rear*



# Introduction

The exodus of young families from urban areas needs to be reversed through a significant increase in the construction of high-quality, higher-density family housing.

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London needs more and better family housing. Londoners are leaving the city in huge numbers, usually because of 'housing-related' issues, and very often when couples start a family. An examination of migration trends alone shows that over the past decade, London has experienced a loss of some 800,000 people to the surrounding regions<sup>1</sup>. (Despite this loss to the rest of the UK, London's population continues to grow as a result of a higher natural growth, *i.e.* the number of births exceeding deaths.) This trend is an inevitable consequence of the younger age profile of a working population, *i.e.* more women of childbearing age. It is also a trend that is repeated in other cities and large towns across the UK, showing that urban areas are not providing for the needs and aspirations of many of their residents.

The vast majority of London's out-migrants are likely to be employed people on moderate incomes who do not qualify for social rented accommodation. Nevertheless, the high price of family homes for sale or rent on the open market in London is beyond what many can afford and is a key factor in driving them away. CPRE takes the view that part of the solution to this is for the availability of family-sized homes within the 'intermediate' (shared ownership) sector to be greatly increased and, for that reason, we have included two affordable housing schemes in our case studies. We recognise that there are other important factors influencing families' locational choices – including the quality of schools, fear of crime and the general urban environment and have considered

this elsewhere<sup>2</sup> – but this report focuses on housing.

The loss of working families from London (and other urban areas) makes it harder to achieve sustainable communities. It increases social polarisation, as cities cater increasingly for the very rich or very poor, and increases commuting, since most jobs will continue to remain in urban areas. This is at odds with the Government's urban renaissance and sustainability objectives. The 2000 Urban White Paper and the work of the Urban Task Force marked a sea change in Government policy towards our towns and cities. Targets for recycling urban land for housing and for increasing residential densities are key elements in that initiative and have been successful in positively influencing planning practices. Worryingly, however, there are signs that, for misguided reasons, commitment to those policies is faltering under the recent drive to increase house building rates, on which CPRE has commented elsewhere<sup>3</sup>. More positively, the importance of good design – at the level of entire developments as well as individual dwellings – is now well established in planning policy, although there is still an urgent need for design expertise to be made more readily available to local planning authorities and there remains a gap between policy and practice.

Mayor Ken Livingstone recognises that the 'urban exodus' is bad news for London and acknowledges that it contributes to employers' difficulty in recruiting and retaining skilled workers<sup>4</sup>. It is also likely to undermine London's economy at a local level because the

<sup>1</sup> *Social Trends 37*, 2007 edition

<sup>2</sup> *Planning for Housing Affordability*, CPRE 2007

<sup>3</sup> *CPRE's response to the Housing Green Paper*, CPRE 2007

<sup>4</sup> *Towards the Mayor's Housing Strategy*, Mayor of London, November 2006 Paragraph 7.4

many people who can afford to leave London and commute back in will be spending much of their income elsewhere. Indeed, travel-to-work times in London are the longest in the UK <sup>5</sup>. The London Assembly has looked into the shortage of family housing in London and concludes that there is an unmet need for some 30,000 family homes <sup>6</sup>.

But the 'urban exodus' is also a problem for the countryside, both within London and beyond: it creates enormous pressure for new housebuilding and associated infrastructure right across southern England, eating into greenfield land, overwhelming transport systems and destroying the character of rural communities. CPRE believes that, if more housing of the right kind and quality were made available in urban London, then fewer people would choose to leave. Development pressure on the countryside could be reduced and London would become a more prosperous and socially diverse place.

And yet, despite the clear need for more family homes, it seems the majority of new housing being built in London continues to be one or two-bedroom flats <sup>7</sup>. This may in part be because building larger dwellings at the higher densities required under planning policy presents new challenges for which developers lack the necessary expertise or experience. We therefore welcome that aspect of the Government's recently published Planning Policy Statement three – *Housing* – which is intended to increase the proportion of new homes that are suitable for families. The purpose of this report is to show that the challenges of building larger dwellings at higher density can be overcome. It shows that it need not be necessary for young families to move out of cities to find suitable new housing and attractive neighbourhoods.

<sup>5</sup> *Regional Trends*, Office for National Statistics, 2006

<sup>6</sup> *Size Matters: The need for more family homes in London*, GLA (Planning and Spatial Development Committee) June 2006

<sup>7</sup> *Housing Space Standards*, GLA, August 2006

*Accordia (Cambridge)  
north side*



## Why higher density?

Much post-war housing in London takes the form of low density suburbs – even in the inner city. The low local population densities that often result are insufficient to maintain the viability of shops, services and amenities (including public transport). The Sustainable Development Commission, for example, states that a viable local bus service or a district heating scheme requires a minimum density of 50 homes to the hectare <sup>8</sup>. Too low a density creates car-dependency and undermines an area's vitality, 'sense of place' and sense of community. The Government's Commission for Architecture and the Built Environment (CABE) recognises that creating a 'sense of place' is the key challenge in creating successful communities. Car-dependency excludes households that do not own a car; generates traffic, noise, pollution and danger to pedestrians; and wastes large amounts of land on parking space. Raising residential densities can reduce these problems without making cars unavailable to those who still want or need them. Crucially, it improves 'liveability' by sustaining a population density that is sufficient to support shops, services, schools, public transport and other amenities close by and within walking distance. It also helps protect urban green space – public parks and gardens – from development. Contrary to common assumptions, higher density family housing can provide an excellent – perhaps an ideal – environment for raising children if it is well designed <sup>9</sup>.

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## Addressing misconceptions

The public policy environment – especially in London – has shifted dramatically in recent years in favour of raising densities for new housing developments and the shortage of new family homes in London is now widely recognised. But developers would be

right if they assumed that many people are still sceptical that attractive family housing can be provided at densities beyond the conventional 'suburban' norms of under 30dph. Many people – and their political representatives – are concerned that higher densities will harm the character of neighbourhoods and will mean less privacy. They are concerned that dwellings will become smaller, private gardens will be a thing of the past and they will suffer from poor sound insulation or poor construction quality.

These fears are understandable in the light of the quality of much new urban housing that has been built in recent decades – in particular, the tower blocks of the 1960s and '70s which were usually quite unsuitable for families and frequently suffered from other major design flaws. This is despite the fact that the overall density achieved by those tower blocks was usually no higher than the terraced streets and squares that they replaced (and which, in many cases, are now considered highly desirable). The crucial point is that the problems created by failed developments of the past are not due simply to their density, but rather to poor design, unappealing location, and poor management and lettings policy. CABE puts it thus:

*'There is real misunderstanding about what higher density housing is, particularly in the context of London and the South East. Many of the problems blamed on density are in fact a combination of problems with location, design, tenure mix, allocation policies, lack of management and maintenance.'* <sup>10</sup>

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## This report

However, there is no doubt that raising densities does present special challenges – especially where larger homes need to be provided. This report is intended in particular for those people who remain sceptical that good quality,

<sup>8</sup> *Building houses or creating communities?* Sustainable Development Commission, 2007

<sup>9</sup> *Attracting and retaining families in inner urban mixed income communities, Findings: Informing Change.* JRF, 2006

<sup>10</sup> *Better Neighbourhoods: Making higher density work.* CABE, 2005



attractive and desirable family housing can be provided in urban areas at higher densities. It acknowledges the challenges and presents a number of real examples of where good planning and careful attention to design has led to a successful outcome.

We have included an explanatory section by Sir Richard MacCormac of MJP Architects, which illustrates how attractive developments comprising 100% three-bedroom family houses – all with off-street parking and private gardens – can be built at over 50dph (and up to 70dph). This density supports local facilities (such as public transport) within easy walking distance of each home and still allows space within the development for those facilities and amenities. The 50dph figure is offered here simply as a benchmark and could be substantially increased by adding flats and maisonettes, either above or in

place of some or all of the houses. The subsequent case studies provide an opportunity to compare several real developments against that benchmark.

The case studies are presented with clear and – where available – comparable data illustrating that they meet important design criteria for family housing. Most have in part been selected because they have won prestigious awards for the quality of their design. We hope that those examples will encourage planners and developers to rise to the challenge created by the combination of a shortage of family housing, a shortage of developable land, and the desirability of having all of one's daily needs close to hand. That latter point is what urban living is all about and, through the provision of more and better family housing, we hope that it will become a reality for many more people.

*Elmington Estate  
(Camberwell/Peckham,  
London)*

# The case studies explained

By Sir Richard MacCormac (MJP Architects)

Inefficient land use in suburban development is a fundamental threat to the preservation of countryside, and this has led to arguments for very high densities consisting of middle and high rise apartments for families as well as those without children. The failed legacy of high rise housing has proved that this only works for a very limited sector of society. We have to recognise that the family house in a suburban setting as distinct from a flat in an urban setting is embedded in an English cultural tradition, and we have to find ways of reconciling this with the protection of rural land. In doing so we believe that it is possible to envisage a new kind of urban or suburban development which need not be car-dependent and has some real communal benefits which are in line with government policy.

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MJP Architects undertook a study focusing on the provision of family accommodation in the form of two and three-storey houses in a suburban environment. This is the housing lifestyle which continues to be a mainstream segment of housing provision, and is typically built at densities of around 25dph. We postulate, however, that while this lifestyle is usually associated with these lower densities it can be achieved with much higher densities. Below, I describe how densities of 50dph and more can be achieved whilst retaining the essential characteristics that make 'suburban-style' developments attractive to families with children. One of our conclusions is that relationships between densities and housing types are very little understood.

The communal benefits of higher densities – pedestrian access to facilities and transport – are the key to the sustainability of urban or suburban development, and the most important finding of the study is the demonstration of the extent to which the suburban aspirations of family housing can be combined with a range of communal

and strategic advantages usually associated with urban contexts.

These potentialities have important strategic implications for planning authorities and meet government objectives set out in PPS3:

- Create more sustainable patterns of development which deliver accessibility by public transport for employment, education, local services, shopping and recreation
- Make more efficient use of land
- Give priority to pedestrians over vehicular movement
- Reduce car dependence
- Promote the design of high quality living environments

This reconciliation of housing environments with strategic planning objectives requires a design methodology which recognises a continuity of spatial strategy from the smallest element of planning, the house type (including its area and internal layout), to the scale of a settlement. A key factor in the design of a sustainable

residential development will be the road layout, its hierarchy and its land-take. Traditional 19th Century street systems (based on a square grid layout) can sustain density across the scale of the settlement. 'Modern' highway design with distributors designed with large radiuses and verges for visibility fundamentally reduce the net densities which can be achieved with housing grouped around access roads.

The key to net density is the house type and its grouping in block layouts around car parking and private and shared open space. So far, our studies have examined the typology of five block layouts from 50 to 120 dwellings per hectare. As densities rise beyond 50dph, layouts become mews-like and the proportion of maisonettes increases, but never exceeding four-storeys.

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### The 50dph benchmark

This report offers the figure of 50dph as a 'benchmark' for 'family' housing developments, which, given various assumptions about average occupancy levels, allows numerous benefits to accrue in respect of supporting local services and amenities. That 50dph figure is, however, based solely on the

number of dwellings likely to be required in order to sustain a population density sufficient to support a viable regional transport link within 10 minutes walk of each home. According to research by DETR (now DCLG) and others, this requires a community of 5,000 dwellings within 800m walking distance. This translates into a required minimum average residential density as follows: assuming a good block layout, these circumstances are likely to occur within a notional circular area with a radius of 600m, thus creating an area of 113 hectares. Allowing 13 hectares (11.5% of the total area) for non-residential use infrastructure (including open space – see the table overleaf), allows a total of 100 hectares in which to accommodate those 5,000 dwellings, requiring a net density of 50dph. The figure of 13 hectares for local infrastructure needs for 5,000 homes is identified in a study made by the London Development Agency <sup>11</sup>.

Where the degree of access to transport and other facilities in the area justify it (such as in more 'urban' locations) the density can be substantially raised by replacing some of the houses with flats, or by increasing the proportion of house that have maisonettes built on the upper floors.

11 *Urban Design Compendium*, English Partnerships, August 2007

*Irako, Cain Street (Waterloo, London)*



## Infrastructure / 5,000 homes

	Number	Land take hectare (net)
Health care	1	0.33
Primary school	2.5	1.65
Secondary school	0.5	1.76
Nursery school	2.5	0.11
Library	0.5	0.03
Leisure centre	0.5	0.2
Playing field	1	1.95
Local store	1	0.05
Main access roads	n/a	4.0
Open space	n/a	4.0
<b>Total</b>		<b>13.0</b>

### Urban form

Given a theoretical site density of 50dph, the question is what kind of housing can be provided at that density and whether that kind of housing is likely to be suitable for families with children.

Assuming that internal roads occupy 20% of the residential area (2,000m<sup>2</sup>/ha), a net density of 50dph gives an average plot size of 160m<sup>2</sup> (including space for private gardens or car-parking space front and back). This allows, for example, a terraced house with a frontage of 6m and a depth of 10m having a 6m deep front garden/parking area to the front and a 10m rear garden. At two-storeys, such a house can comfortably accommodate three bedrooms or, at three-storeys, four bedrooms and a second bathroom (for example).

In appropriate urban settings, the 50dph density can be substantially increased by the inclusion of flats or maisonettes above houses, or by replacing housing with low-rise or medium-rise blocks of flats.

At MJP Architects, we have extended our study to include mixes of family and non-family housing with one and two-person flats. Family housing remains at 50 dwellings per hectare and flats at, say, 150 dwellings per hectare to create a more diverse demography.

The mix of density and dwelling type proposed for the initial study is 30% one- and two-person flats at 150 dwellings per hectare and 70% family houses at 50 dwellings per hectare which yields a land use of 10%

*Guest Street (New Islington, Manchester) front*





Photo: Tim Crocker

apartments, 70% family housing and 20% released for open space and other uses (in addition to the 13 hectares already allocated for local facilities). What is perhaps unexpected is that the intensification of 30% of the dwellings releases as much as 20% of the land take for open space and other uses, bearing in mind that gross density is sustained at 50 dwellings per hectare. Where intensification is achieved through flats or maisonettes being built above houses, the increase in density does not reduce the number of family houses. Partial intensification could allow some or all of the family dwellings to occupy larger plots while retaining the necessary 5,000 dwellings within 800m walking

distance of local services and amenities. Alternatively, more of the area could be utilised as open space.

There are many possibilities that follow from this. It opens up a vision of a sustainable higher-density residential development with local employment and real variety achieved with different patterns of open space with, potentially, various ecologies to create very special neighbourhoods.

*Richard MacCormac  
MJP Architects*

*Staiths South Bank  
(Gateshead)*

# Characterising family housing

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## A brief definition

For the purpose of this report, we have defined ‘family housing’ as any housing unit that has the following characteristics:

- Three or more bedrooms and bedspaces
- Direct access to a private garden measuring at least 48m<sup>2</sup>
- Having internal living and storage space at least equivalent to the Parker Morris standards (see below)

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## Car parking

We have not made the assumption that all family dwellings must necessarily have their own dedicated private car-parking space (garage or driveway) directly associated with the home. However, we do recognise that easy access to a car is likely to be an important consideration for many people in making a judgement as to the suitability of a family home.

Alternatives to a private parking space include on-street parking, car clubs and secure car-parks nearby within the site. For each case study, therefore, we have included details of the level and nature of car-parking facilities. Where available, parking ratios are given, indicating the mean number of parking spaces per dwelling (e.g. 1:1, 1:1.5, etc). A ratio of 1:2, for example, means one car parking space for every two homes.

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## Internal living space

We have considered the Parker Morris standards which, in the 1960s and 1970s, were used as a minimum level of living and storage space provision for family housing provided by public authorities. These standards require an internal floor area (square metres) by number of bedspaces (as opposed to bedrooms) as follows:

No. of bedspaces	Total floor area (m <sup>2</sup> )
3	57.8
4	75.7
5	85.9
6	97.5

These figures include full height internal storage provision of 3–5m<sup>2</sup> per dwelling.

In the preceding section by Sir Richard MacCormac, we showed that, for a development exclusively comprising houses at a density of 50dph, a plot size of 160m<sup>2</sup> (including gardens) is quite feasible. An internal floor area of 60m<sup>2</sup> can be achieved in a single-storey, together with a front garden and a substantial rear garden. A two-story, three-bedroom house (providing, perhaps, four bedspaces), for example, built to allow a density of 50dph would therefore very substantially exceed the Parker Morris standards.

All of the housing identified as ‘family housing’ in this report exceeds the internal space requirements of the Parker Morris standards, sometimes substantially.

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## Calculating residential densities

This report presents seven case studies of good quality, attractive housing suitable for families with children and which have been built at relatively high densities. For each case study, we have sought to indicate the density of areas occupied by **family homes exclusively**. This has usually required a specific section of the site to be identified in order to exclude parts occupied by smaller dwellings and flats. The densities thus quoted have therefore not been ‘artificially inflated’ by the inclusion of smaller dwellings that do not qualify as appropriate ‘family homes’. Similarly, where schemes are mixed use – *i.e.*

include non-residential development such as shops, offices or community centres within the site – the area covered by the non-residential buildings has been excluded from the calculation of net site density.

Internal roads which are associated with residential buildings are included in the calculation. Public open space is excluded in calculating densities, although the proportion of the site which is devoted to public open space is given in order to indicate the general nature of open space provision within each development.

Notwithstanding how densities are calculated, perhaps the key factor illustrating the nature of individual housing designs is the total plot size (including gardens) for each house. We therefore give the average plot size for family houses in each case study, and this can be compared with the 160m<sup>2</sup> plot size available at 50dph.

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### Housing mix

For each case study, the overall mix of each size of dwelling is given. This is because all examples contain a substantial proportion of dwellings which do not meet our criteria for ‘family homes’, and it is therefore not useful to make direct comparisons of overall site densities for different case studies without reference to the different mixes provided.

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### Open space

One of the most important features influencing the attractiveness of a residential area to families with children is the availability and quality of public or private open space within or adjacent to the development. We have not sought to establish any quantitative criteria in this regard for each individual development and, clearly, the greater the proportion of open space, the lower the gross residential density will be unless

densities are raised in all or part of the area. However, we have shown that it is possible to maintain a gross density of 50dph throughout with some 3.5% of the gross area remaining as green open space (the calculation in the following section assumes four hectares of open space out of a total of 113 hectares). The following section explains how substantial amounts of open space can be made possible through partial intensification in this way. Perhaps the best and most efficient way of providing open space in higher density residential areas – especially for families with children – is for that space to be enclosed within terraced squares in the manner of the highly desirable Georgian and Victorian squares in London and elsewhere.

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### Other characteristics

We have not systematically identified a number of additional characteristics which will have an important bearing on the suitability of housing for families (or, indeed, any household). For example: standards of sound insulation; quality of construction; location; management; and accessibility to public transport are all important here. A report by the London Housing Federation addresses the requirements of affordable family housing in respect of several important design characteristics<sup>12</sup>. While we recognise the importance of these – and many other – matters, they are not characteristics which are inevitably determined by the density of development. Design and layout are key considerations, but beyond the scope of this report. Where a particular case study development in this report falls short of expectations in respect of one or other of such characteristics cited above, we believe that problems can largely be overcome in comparable schemes by following established good practice<sup>13 14 15</sup>.

<sup>12</sup> *Capital Gains: making high density housing work in London*, London Housing Federation, July 2002 (ISBN: 086297 476 3)

<sup>13</sup> *Delivering Great Places to Live*, CABI 2005

<sup>14</sup> *Code for Sustainable Homes*, CLG 2006

<sup>15</sup> *Planners Pack*, Energy Saving Trust, 2008



## Case study 1

# Iroko, Coin Street (Waterloo, London)

Iroko was completed in 2001 and provides a total of 59 dwellings on a 0.75 hectare (1.8 acre) urban brownfield site close to Waterloo Station and the River Thames in central London. The development is built around the four sides of a secure 2,170m<sup>2</sup> communal garden square. Public open space comprises nearly 30% of the total site. The scheme therefore achieves a gross residential density of 110dph, excluding public open space. The Coin Street neighbourhood centre forms the fourth side to the development and the scheme also includes two corner shops.

### Housing mix and size

The entire development offers the following mix:

**20 × six-bedroom (four-storey) houses**

**12 × five-bedroom (four-storey) houses**

**2 × four-bedroom (three-storey) houses**

**4 × three-bedroom maisonettes**

**21 × two-bedroom maisonettes & flats**

The houses have a footprint (excluding the garden) of about 49m<sup>2</sup> (three-storey) and 57m<sup>2</sup> (four-storey). Including gardens, the plot sizes become about 85m<sup>2</sup> and 92m<sup>2</sup> respectively. If this design were replicated in a multiple block layout allowing 20% of the residential area to be allocated to internal roads, this relatively small footprint (and garden), combined with the use of three or four storeys, enables the net residential density to reach about 85–95dph for houses alone whilst maintaining good internal space standards.



### Gardens

All dwellings have private open space – gardens, terraces or generous balconies. All the houses have direct access to private gardens opening on the communal courtyard. The gardens are around 35m<sup>2</sup>, which is not large, but should be considered in the context of the substantial amenity value of the communal open space which they adjoin. Were the gardens to be increased in size to 50m<sup>2</sup> (at the expense of part of the communal area), the density would still be above 80dph.

### Parking and access

The site is adjacent to Waterloo station, and therefore public transport access is excellent. Nevertheless, the site is provided with 21 residential parking spaces (5% for disabled) at ground level; and a 265-space basement public car park serving the wider area (although no spaces are dedicated for residents).

### Awards

Design for Homes Housing Design Award (2001)

ROOM National Partnerships Awards (2002)

Blueprint Architecture Awards 2002 – Best Residential Building

RIBA Award 2002



## Commentary

The development attempts to fully exploit the potential for large family homes with individual gardens whilst also providing for smaller households to create a good mix. All dwellings have private open space – gardens, terraces or generous balconies – but the shared garden is also considered to be an essential requirement. Communal space is maximised by arranging the homes on three sides of a large landscaped garden.

The scale and streetside elevations of the new housing are intended to reflect its urban setting. On Coin Street and Cornwall Road five-bedroom terraced houses are four storeys high, with an attic room set back from the street elevation and opening on to a generous roof terrace overlooking the courtyard garden. The Coin Street terrace also

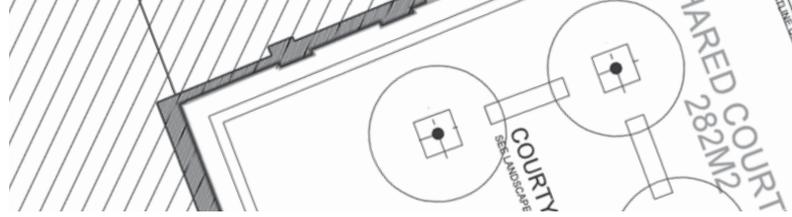
includes two three-bedroom maisonettes, again with roof terraces, above a two-bedroom flat. On Upper Ground the height is increased in response to the busy urban character of the street and the massing of buildings opposite. Three-storey houses are topped by two-storey maisonettes, reached by a broad communal terrace again overlooking the garden.

The corners of the Upper Ground terrace are marked by two shops at ground level, with one, two and three-bedroom flats and maisonettes above.

All the houses have individual street level entrances.

<b>Design team:</b>	<b>Haworth Tompkins Ltd</b>
<b>Client:</b>	<b>Coin Street Community Builders</b>
<b>Sources:</b>	<b>Haworth Tompkins Ltd</b>





## Case study 2

# Colebrooke Place (Islington, London)

Colebrooke Place comprises three flats and nine houses on a small (0.15 hectare, 0.37 acre) urban site in central Islington in North London. It achieves a gross residential density of 77.2dph, including a small communal courtyard (282m<sup>2</sup>).

### Housing mix and size

The entire development offers the following mix:

**3 × two-bedroom flats**

**8 × three-bedroom houses**

**1 × five-bedroom house**

The houses are three-storey and most have a footprint (excluding the garden) of about 90m<sup>2</sup>. The five-bedroom (corner) house has a much larger internal footprint at 207m<sup>2</sup>.

The plot size of the three-bedroom houses is approximately 120m<sup>2</sup>, including the garden. For a development exclusively comprising this kind of house and allowing 20% of the area for internal roads, this would produce a net residential density of about 67dph.

The relatively small footprint (and garden) of most of the houses combined with the use of three storeys enables the net residential density to reach this level whilst maintaining good internal space standards.

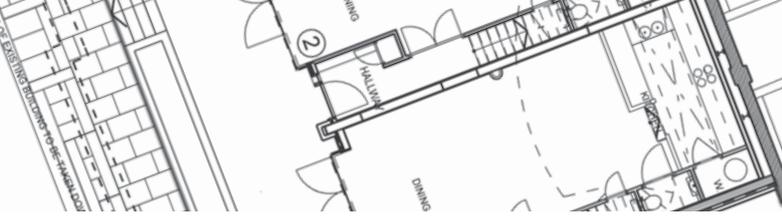
### Gardens

Seven of the houses have relatively small private rear gardens, most of which are approximately 30m<sup>2</sup>. The five-bedroom (corner) house has a much larger garden at 118m<sup>2</sup>. The two other houses have a roof terrace.

### Parking and access

Six parking spaces are provided on site and there are two garage spaces on an adjacent site. The on-site provision is on the ground floor of a converted workshop that occupies one corner of the site (the upper floors being converted for the three flats). In addition, the parking ratio is therefore low, although this is compensated for somewhat by the close proximity to good Underground services (Angel Station), bus routes and town centre facilities. Secure bicycle storage is also provided on-site.





## Awards

No competitions entered.

## Commentary

The new houses are built in an L-shaped terrace, leaving a common private courtyard space. The nature and location of the site made it desirable to secure the site with gates preventing casual public access to the courtyard. Privacy is further enhanced by retaining the high boundary walls to the rear of

both legs of the terrace. The houses are flat-fronted to define the square and work together to create a unified façade rather in the manner of the Georgian houses in the vicinity.

**Design:** GML Architects

**Sources:** GML Architects





## Case study 3

# Accordia (Cambridge)

When completed, Accordia will comprise 212 houses and 166 apartments on a 9.5 hectare urban brownfield site in Cambridge. The gross density is therefore 40dph. Approximately three hectares (one third) of the area is landscaped public open space. Excluding public open space increases the density to approximately 67dph (although it should be borne in mind that very few of the houses have private gardens).

### Housing mix and size

The entire development will offer the following mix:

**30 × two-bed houses**

**81 × three-bed houses**

**75 × four-bed houses**

**26 × five-bed houses**

**70 × one-bed apartments**

**91 × two-bed apartments**

**1 × three-bed apartment**

**2 × four-bed apartments**

There are several designs among the three and four-bedroom houses. The four-storey, four-bedroom houses have plot sizes of, for example, 165m<sup>2</sup> and 113m<sup>2</sup> (including gardens, terraces and car-ports in various arrangements). Assuming 20% of the residential area is taken up by internal access roads, these would allow a net density of 48 and 71dph respectively. The lower figure concerns those properties with gardens (about 72m<sup>2</sup>).

The three-storey, four-bedroom houses have plot sizes of 75m<sup>2</sup> and 150m<sup>2</sup> (including terraces and car-ports) and these would allow a net density of 107 and 53dph respectively. The three-storey, three-bedroom houses have plot sizes of, for example, 70m<sup>2</sup> (including terraces and car-ports) and these would allow a net density of 114dph.

### Gardens

A small number of the townhouses have private gardens, which are around 72m<sup>2</sup>. In the majority of cases, however, outside areas are occupied by small

terraces and car-ports. Nevertheless, were the designs to include greater provision of private gardens, the resulting net densities could still remain relatively high at above 50dph. It has been a clear policy choice by the developers to opt for the provision of communal open space rather than private gardens.

### Parking and access

Overall, the parking ratio for the house is 1.25:1. All the houses have at least one parking space within the plot; the five-bedroom houses and half of the four-bedroom houses having two parking spaces. Car ports and garages are often at ground level, beneath the houses.

The flats are provided with secure communal (indoor) parking and, in addition to the private spaces, there is substantial parking available at the sides of the internal access roads throughout the development.

### Awards

**Housing Design Awards 2006 – Overall Winner**

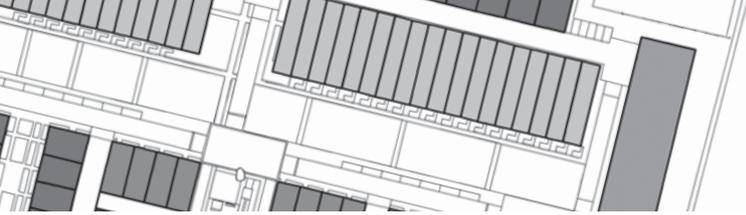
**Building for Life Gold Standard 2006**

**National Homebuilder Awards 2006**

**Best Housing Project of the Year 2004**

**Best House of three or more storeys**

**Housing Design Awards: National Project Award, 2003**



## Commentary

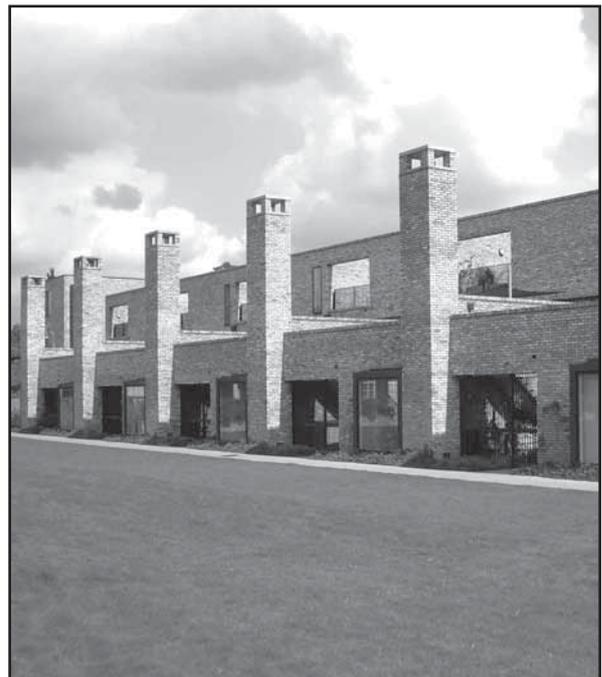
Accordia is a major new housing scheme which has received much interest in the UK, primarily because it demonstrates that it is possible for a volume house-builder to support high quality architecture. The design includes a variety of innovative house and apartment types in the form of terraces, courtyard houses and 'set-piece' apartment buildings, composed within public landscaped gardens over one third of the site.

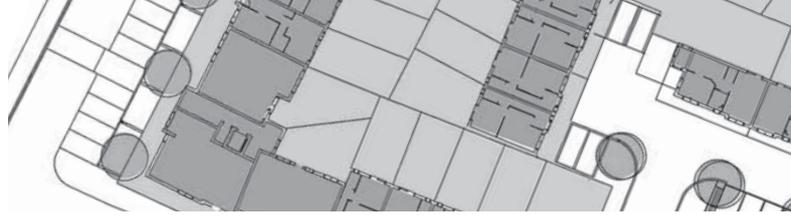
The buildings are arranged in three dense groups of up to 65dph, separated by mature landscape. As part of a strong existing landscape framework, including over 700 mature trees, the principal concept is about 'living in a large garden', informed by local context references taken from College garden courts and the public 'greens' of Cambridge. In place of traditional gardens, private open spaces in the form of courtyards, roof terraces and large balconies are designed as an integral part of the architecture. In combination with the generous communal gardens this aims to reflect the changing aspirations of our modern lifestyles and continues a strong tradition of domestic architecture in Cambridge. It is fair to say that the relatively high net density has been achieved largely through this approach of opting for communal open space rather than private gardens.

The master plan was designed for pedestrian and cycle demands, with landscaped pedestrian 'streets', mews streets with shared surfaces, discreet car parking and integrated cycle parking for all dwellings. Each dwelling is accessed from an urban street side and opens out onto a shared landscape which includes amenities for passive and active recreation.

The form of the buildings is not only determined by the relationship and scale of the open space and urban frontages but also by the solar orientation. The larger scale apartment buildings and terraces are associated with the larger scale open spaces and are typically on an east/west orientation to minimise overshadowing of adjacent homes. The lower terraces and courts are arranged around the more intimate landscape spaces with south facing terraced gardens.

**Architect:** Feilden Clegg Bradley Architects LLP  
**Associate Architects:** Alison Brooks Architects  
**Client:** Countryside Properties (Accordia) plc  
**Sources:** CABE/ Feilden Clegg Bradley Architects LLP





## Case study 4

# Elmington Estate (Camberwell/Peckham, London)

The Elmington Estate replaces a 1960s high-crime-rate urban estate with a striking new development which re-establishes the basis of a traditional street network. When complete, it will provide over 300 flats and houses, predominantly to accommodate families. These will be mainly for rent by the London Borough of Southwark, but with a small proportion for sale.

### Housing mix and size

The gross density of the finished project will be approximately 88dph. The net density will be very close to this figure because, other than two small play areas for children, there is no appreciable area of public open space within the development. The estate will provide the following mix:

**42 × one-bedroom flats**

**32 × two-bedroom flats**

**16 × two-bedroom houses**

**35 × three-bedroom houses**

**7 × four-bedroom houses**

**2 × five-bedroom houses**

Plot sizes for the houses are 120m<sup>2</sup>. Allowing 20% for internal access roads, this would allow a net residential density of 67dph.

Space standards are substantially more generous than is the case with comparable schemes, in keeping with tenants' previous experience in the redundant GLC (Greater London Council) built housing, and going beyond current regulations for adaptability and flexibility.



### Gardens

All of the family houses have private rear gardens which are mostly arranged back-to-back within the interior of the blocks created by the network of streets. The gardens are 45m<sup>2</sup>. All dwellings have small front gardens, varying in size, but even the smallest can accommodate bicycles and bin store.

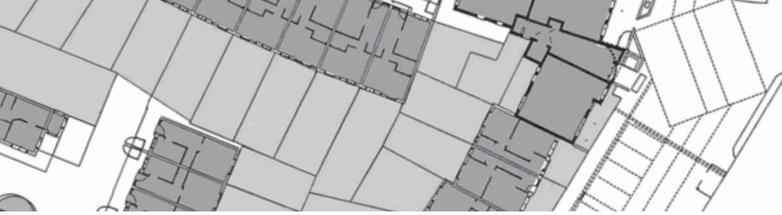
### Parking

The parking ratio is 1:2. Parking is provided on-street and in lay-bys within the development, and also in a shared surface area and on-street nearby. Spaces are not allocated but the scheme will be monitored and, should conflicts occur, a residents' parking scheme will be introduced.

### Awards

**Building for Life (Silver) 2005**





## Commentary

Elmington Estate offers a striking and attractive contrast with the run-down, low-quality blocks and Edwardian terraces that surround it. The main drawback of the development, however, is probably the lack of public green open space.

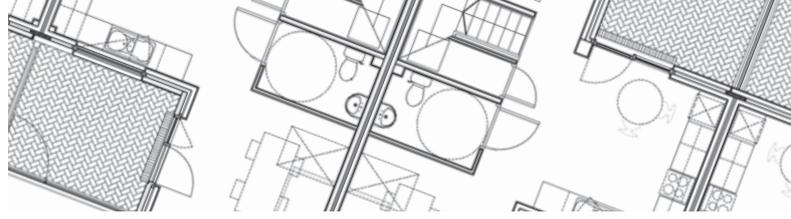
The houses almost all face directly onto streets. Monopitch roofs give greater height on façades overlooking the streets, thus producing a more imposing presence and sense of enclosure than pitched roofs usually provide. Four or five-storey flats, some with elaborate rooflines, mark the corners of the block, with two and three-storey terraced houses between.

An existing pub and some private flats have been integrated into the block structure and mature trees have been successfully incorporated into the pedestrian entrance.

House roofs are finished with concrete interlocking tiles while flats have steel standing seam coverings. Two types of red facing brick have been laid in different bonds and string courses of turquoise green glazed bricks contribute to the variety of the elevations. Stained softwood window frames and naturally finished cedar boarding reduce maintenance costs and galvanised steel balconies ensure that all homes have usable private outdoor space.

<b>Client:</b>	London Borough of Southwark
<b>Design team:</b>	BPTW Partnership and Pollard Thomas Edwards Architects
<b>Sources:</b>	CABE, BPTW Partnership





## Case study 5

# Guest Street (New Islington, Manchester)

The New Islington regeneration scheme covered nearly 12 hectares (29 acres) of former industrial land between the Ashton and Oldham-Rochdale Canals. The Guest Street development comprises 14 houses in a single terrace and was completed in 2006. The total site – being exclusively in residential use – covers an area is approximately 0.2 hectares (creating a net density of around 70dph). There is a proposal for a landscaped common garden at the rear which is shared between the residents of Guest Street and the residents of Piercy Street, which runs parallel and behind.

### Housing mix and size

The entire development offers the following mix:

**6 × three-bed (three-storey) houses**

**6 × two-bedroom (two-storey) houses**

**2 × two-bedroom (one-storey) houses**

The Average plot size throughout the development is 120m<sup>2</sup>, and therefore somewhat larger for the three-bedroom units. Allowing 20% of an area for internal roads, this would allow a net residential density of 60–65dph.

### Gardens

Gardens are about 25m<sup>2</sup> for the three-bedroom units (the average is 20m<sup>2</sup>). This is small, and the development would therefore benefit very substantially from the proposed communal area to the rear. Also, the in-curtilage courtyards are likely to be planted up over time, softening the overall aesthetic.

### Parking

There are two in-curtilage parking spaces at the rear of each of the larger units (the three-bedroom houses) and one for each of the two-bedroom houses. These spaces need not be used for cars and can be used as a patio.

### Awards

**Housing Design Awards in 2006: Best Metropolitan Public Housing scheme (and currently shortlisted for completed project 2007)**

**Brick Awards 2007: Currently shortlisted for best public housing project in the Eco homes 'excellent' ratings**

### Commentary

The masterplan compartmentalised the wider regeneration project area into separate packages, introducing variety in design throughout. The whole project included the restoration of historical former industrial buildings, helping to create a sense of character for the area. Extensive and effective consultation with residents is seen as a hugely important factor in the quality and success of this scheme.

The architects have used materials that are intended to wear well and 'age gracefully' rather than being likely to deteriorate aesthetically and functionally over time. Differentiation between the individual properties is achieved through the face of the terrace being 'stepped' in plan (rather than being within a single, continuous plane throughout) and the use of four types of brick.

In plan, the units are T-shaped with the kitchen on the short leg of the T spanning between front and rear. The front courtyard is about 10m<sup>2</sup> and the rear varies, being generally about 15m<sup>2</sup>. The courtyards are semi-private as they are open at one end. The T-shaped plan maximises natural lighting.



The kitchen, living room and dining room are arranged around the stairs and bathrooms at the centre. Consultation indicated that family residents wanted a kitchen at the centre of the house where everyone could gather naturally and which were big enough to accommodate dining tables. Screens can be pulled across to vary the layout and allow privacy. In order to promote a sense of security, the front door and all opening windows face the more private courtyards.

<b>Design:</b>	deMetz Forbes Knight
<b>Developer:</b>	Urban Splash
<b>Client:</b>	Manchester Methodist Housing Association
<b>Masterplan:</b>	Will Alsop
<b>Sources:</b>	deMetz Forbes Knight





## Case study 6

# Staiths South Bank (Gateshead)

Staiths South Bank comprises 762 homes on a 40-acre (16.2 hectare) urban brownfield site, achieving a gross residential density of 47dph.

### Housing mix and size

50 different types of home are offered over the five phases of the development. Phase one was completed in 2005, Phase three was completed in 2007, and the final phase is expected to be completed in 2010. Overall, there are 23 variations of house design. Phase one (156 dwellings) offers the following mix:

**16 × four-bedroom houses**

**32 × three-bedroom houses**

**12 × two-bedroom houses**

**1 × three-bedroom flat**

**88 × two-bedroom flats**

**7 × one-bedroom flats**

The internal floor area for four-bedroom houses in Phase one 1,400 sq ft (130m<sup>2</sup>) with generous ceiling heights at 2.03m. Almost half the site is public green open space.

### Gardens

All two, three, and four-bedroom houses have direct access to private gardens of around 45m<sup>2</sup>. All gardens back on to south-facing shared and communally managed pocket parks with permanent barbecues for residents to use.



### Parking and access

Car parking ratio overall is 1:1, plus visitor parking. The allocated parking bays are rarely located immediately outside the home.

Bicycle parking is provided and all homes have secure cycle stores.

All houses are within 400 metres of a bus stop.

### Density of family housing

Within phase one of the development, consisting of courtyards, houses and one/two-bedroom flats with private yards, the average plot size for the houses with gardens is almost 200m<sup>2</sup> (7.1m × 28m) which, allowing for 20% of the residential area to be taken up by internal access roads, would allow a net residential density slightly over 40dph.

### Awards

The design came third out of 93 schemes in the Commission for Architecture and the Built Environment (CABE) Housing Audit assessing the design quality of new homes in the north east, north west and Yorkshire & Humber, 2005.



Photos: Tim Crocker



Photo: Tim Cocker

## Commentary

Staiths South Bank offers a wide range of external surface colours and materials including render, brickwork and cedarwood cladding. There is a choice of six different timber front doors.

Internally, the choice of layouts ranges from open plan or reverse living (living rooms on upper floors) and open ceilings that extend up to the eaves.

With Gateshead Council support, the scheme became the largest new-build Homezone, an experimental scheme supported by a £400,000 grant from the Department for Transport. Pioneered over the last 20 years in Europe, Homezones aim to promote a more balanced relationship between pedestrians and vehicles. Rather than prioritising cars, they encourage environments where the spaces between the houses are safe for children to play and for adults to meet their neighbours.

Each phase of the project has its own play strategy, extended to both children and adults by incorporating unusual equipment within the streetscape as well as benches using reclaimed timber where residents can meet. The streets gradually become narrower towards the centre of the estate and the pavements wider

There are proposals to provide further retail/mixed use units in future sections of the development.

<b>Design team:</b>	<b>Ian Darby Partnership, Hemingway Design, Arup and Glen Kemp</b>
<b>Client:</b>	<b>George Wimpey City (now George Wimpey North East).</b>
<b>Sources:</b>	<b>Hemingway Design Ltd Building for Life The Power of the Barbecue (Arts Council England, 2007)</b>



## Case study 7

# Beaufort Court (Fulham, London)

This scheme, completed in 2003, consists of 65 affordable housing units (including shared ownership) on a restricted urban site located within an active area of residential, retail and commercial uses. The unit sizes range from one-bedroom flats to large family houses. The site is 0.53 hectares and the scheme therefore achieves a gross density of 123dph. Approximately one third of the site is public open space comprising an all-weather play court and raised landscape terrace/play space built over a semi-basement car-park.



### Housing mix and size

The scheme offers the following mix of accommodation:

- 4 × one-bedroom (one-bedspace) flats
- 27 × one-bedroom (two-bedspace) flats
- 12 × two-bedroom (four-bedspace) flats
- 8 × three-bedroom (five-bedspace) maisonettes
- 8 × three-bedroom (five-bedspace) houses
- 6 × four-bedroom (seven-bedspace) houses

The 14 family houses are arranged in a single two-storey terrace along one side of the site. The flats and maisonettes are in a six-storey block on the opposite side. The average plot size of the family houses is about 110m<sup>2</sup>, which, allowing for 20% of the residential area to be taken up by internal access

roads, would allow a net residential density of 73dph. The footprint of the four-bedroom units is about 58m<sup>2</sup> and, for the three-bedroom houses, it is about 50m<sup>2</sup>. This is somewhat smaller than other schemes featured in this report (the width of the units is relatively narrow at 4.2m), hence the relatively high density and this may reflect the fact that this is an affordable housing scheme and was therefore built to a more limited budget.

### Gardens

All family houses have direct access to a private rear garden with an average size of about 40m<sup>2</sup>.

### Parking and access

The site has an underground (semi-basement) car park with 34 dedicated parking spaces. This facility is likely to be more important for the occupiers of the flats because parking space is also available within the communal area immediately outside each house.

### Awards

- Housing Design Awards 2001 – Project Award
- Housing Design Awards 2004 – The UK Housing Corporation's Best Example of Affordable Housing
- National HomeBuilders Award 2004 – Best Social Housing Scheme
- Building for Life Awards 2004 – Gold Standard



## Commentary

Built above the eastern end of the car park, the third side of the development comprises a tenants' meeting hall and workshop space at ground level with one-bedroom flats above in addition to the all-weather play court. The scheme has a strong sustainability agenda with the building fabric providing high thermal and acoustic performance.

The scheme has benefited from extensive positive involvement and communication with the local authority planning department, the Police (for Secured By Design issues) and specialist subcontractors. This is the first social housing project in the UK to incorporate three off-site fabrication approaches in one scheme: a prefabricated steel load-bearing system incorporating large-scale cold-rolled panels, large scale hot-rolled elements, and three-dimensional modular construction. It is also one of the first significant projects to reach completion using the PPC 2000 partnering contract, a concept which depends on everyone sharing a sense of co-ownership of the

project; working systems were transparent and information was open and shared. The construction far exceeds building regulations standards.

The scheme provides a design that maximises surveillance through the way people live and interact with each other rather than the CCTV cameras of gated communities. It aims to create a 'Secured By Design' environment through careful and well considered design and by creating active edges to streets and urban blocks.

Beaufort Court has achieved a very high quality of design and construction and has been recognised as successful in many awards and publications. Most importantly, it has been highly acclaimed by the residents.

<b>Design:</b>	<b>Feilden Clegg Bradley Architects</b>
<b>Client:</b>	<b>Peabody Trust</b>
<b>Sources:</b>	<b>Feilden Clegg Bradley Architects</b>





Campaign to Protect  
Rural England

## Campaign to Protect Rural England

The Campaign to Protect Rural England (CPRE) exists to promote the beauty, tranquillity and diversity of rural England by encouraging the sustainable use of land and other natural resources in town and country. We promote positive solutions for the long-term future of the countryside to ensure change values its natural and built environment. Our Patron is Her Majesty the Queen. We have 59,000 supporters, a branch in every county, nine regional groups, over 200 local groups and a national office in central London. Membership is open to all. Formed in 1926, CPRE is a powerful combination of effective local action and strong national campaigning. Our President is Bill Bryson.

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