



Adams, D. , Croudace, R. and Tiesdell, S. (2011) Design codes, opportunity space and marketability of new housing. *Environment and Planning B: Planning and Design*, 38(2), pp. 289-306. (doi: [10.1068/b36055](https://doi.org/10.1068/b36055))

The material cannot be used for any other purpose without further permission of the publisher and is for private use only.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<http://eprints.gla.ac.uk/42808/>

Deposited on 01 April 2021

Enlighten – Research publications by members of the University of  
Glasgow

<http://eprints.gla.ac.uk>

# DESIGN CODES, OPPORTUNITY SPACE AND THE MARKETABILITY OF NEW HOUSING

Accepted version of paper published in *Environment and Planning B: Planning and Design* (2011), 38(2), 289-306

Published version available at: [doi.org/10.1068/b36055](https://doi.org/10.1068/b36055)

**David Adams, Robert Croudace and Steven Tiesdell**

Urban Studies, School of Social and Political Sciences,

University of Glasgow

25 Bute Gardens, Glasgow G12 8RS

E-mail: [david.adams@glasgow.ac.uk](mailto:david.adams@glasgow.ac.uk)

## Abstract

This paper is about state-market relations in speculative housebuilding, with specific reference to the means by which higher quality design can be achieved in new residential developments. Applying the concept of opportunity space, the paper investigates the extent to which form-based/design codes change developers' opportunity space both in absolute terms and vis-à-vis the opportunity space of designers. It interrogates this using evidence from a major design coded residential development in the south-east of England, drawing on interviews with housebuilders. It concludes that design codes have the potential to transform the market context for new housebuilding, but that the typical housebuilder has yet to be convinced of their business advantages.

## INTRODUCTION

Since the late 1990s, a government-led campaign has sought to increase the design quality of residential development in England. Key elements of this included *Places, Streets and Movement* (DETR 1998), *By Design: Urban Design and the Planning System* (DETR/CABE 2000); *Planning Policy Guidance Note 3: Housing* (DETR 2000a); *By Design: Better Places to Live: A design companion to PPG3* (DTLR/CABE 2001) and an array of area-specific documents, such as the revised version of the Essex Design Guide (EPOS 1997). These documents were instrumental in encouraging, perhaps forcing, a re-think of industry practices regarding design quality (see Hall 2007), with housebuilders also becoming increasingly aware of concern about design quality. This was evident in high-profile appeals and press releases from individual housebuilders after the 2000 version of PPG3 urged the industry to raise its game. The publication of *Building for Life* (CABE *et al* 2003) demonstrated the growing commitment of industry leaders to good design. To further stimulate action, CABE commissioned a series of housing design quality audits (CABE 2004; 2005; 2006) finding, *inter alia*, "... far too much development that is not up to standard and far too little that is exemplary in design terms." (CABE 2006: 7)

Within this wider policy context, form-based or design codes have been seen as a means of delivering better development and enhancing overall place quality:

... the real potential of codes rests in their ability to coordinate outputs from different developers/designers across large sites and to integrate different design elements with a forcefulness that other forms of guidance cannot match. (Carmona & Dann 2007a: 17)

The new prominence of design codes derives largely from New Urbanist practice in North America and elsewhere (see Ben-Joseph 2005; Walters 2007; Parolek *et al* 2008), with the development of Seaside in Florida being particularly well-known. Design codes were part of a larger New Urbanist challenge to conventional planning and development, especially over housing development.

Following the pioneering development at Poundbury (Thompson-Fawcett & Bond 2003; Hardy 2005), design codes have become embedded within English residential design guidance (DETR 2000a; 2000b; DTLR/CABE 2001; CABE 2003; 2004; DCLG 2006a Roger Evans Associates 2007); implemented at high profile demonstration projects (e.g. Upton, Northamptonshire) and evaluated by government-funded research (DCLG 2006b; DCLG 2006c). Up to now, research on design codes has focused on their direct impact on design, place quality, and delivery. Carmona *et al* (2006), for example, discuss issues of 'quality', 'speed' and 'certainty' of delivery; while DCLG research (2006b) focuses on similar issues.

As yet, there has been little investigation of the impact of codes on developers' attitudes and approaches, particularly on the design and marketability of new housing. Several research questions immediately occur: Do design codes enable developers to achieve a better market position by exploiting site potential more effectively? How much do developer cultures have to change to achieve this? Does tighter design regulation work by forcing change upon developers, or by encouraging them to see commercial benefit in it? If the latter, how much does it affect their core business strategy?

Focusing on state-market relations in speculative 'volume' housebuilding, this paper begins to address these questions. Applying the concept of opportunity space, it investigates whether design codes enhance quality by restricting developers' opportunity space thereby forcing their compliance or, alternatively, by changing development cultures and practices. These issues are interrogated using evidence from a major design coded residential development in south-east England. The paper is in five parts. The first part provides the theoretical context by reviewing the concept of opportunity space. The second discusses design codes and relates them to the concept of opportunity space. The third explains the research undertaken and outlines the development at Fairfield Park, while the fourth discusses the impact of the design code. In the final part we draw conclusions.

## **'OPPORTUNITY SPACE' THEORY**

### **Design quality**

While the quality of contemporary residential development is an important policy issue, what is meant by 'higher quality' and 'better design' remains subject to debate. Three interrelated notions of design quality can be identified. In each case, improving design quality may (or may not) increase production costs but should increase development revenues. The first is construction or physical design quality (the quality of materials used and how well these are assembled). The second is intrinsic building/architectural design, which essentially relates to the familiar triad of 'firmness, commodity and delight'. In the short term, this includes such considerations as 'kerb appeal' and, in the longer term, the overall functionality and appeal of the dwellings. The third is place quality - that is, its quality as a setting for social life, activity and interaction, which includes, *inter alia*, the design quality of the public realm and the provision and quality of amenity spaces and facilities. More fundamentally, however, design can ensure that the individual increments of development contribute to a better-integrated whole.

Design codes potentially relate to all these aspects of design quality. The design code can, for example, specify the use of certain materials; require compositional principles, including design motifs and patterns derived from the local or regional vernacular; and mandate the layout and definition of spaces. Design codes can also balance housebuilders' individual interests – being able to sell their houses for more than their production costs - and their collective interests – producing a high quality place, which, *inter alia*, helps individual properties sell faster at a higher price.

### **The role of design in the development process**

Although the UK's speculative housebuilding industry is dominated by a small number of very large firms, the business strategies of different firms vary greatly, especially with respect to rates of return, project scale, areas of operation, attitudes to risk, attitudes to design, etc. Thus, key questions concern how design codes affect developers' perceptions of factors, such as reward, risk, uncertainty and time, which make them more or less likely to provide higher quality development.

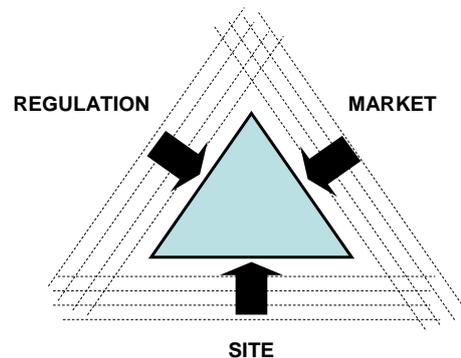
Designing and producing residential environments involves different actors who have differing objectives, motivations, resources and constraints. This is a highly social process in which development actors variously 'negotiate, plot and scheme' to achieve their desired design and built form, in which process character, personality and interpersonal skills are crucially important (see Bentley 1999: 28-43).

Drawing on Giddens' structuration theory, Bentley (1999) argues that all development actors have 'resources' (finance, expertise, ideas, interpersonal skills, etc), which other actors want and need, and operate by specified 'rules'. For private sector developers, the rules relate to budget constraints, appropriate rewards, risk and the need to create a saleable product. The designer's primary resource is design expertise, including both technical knowledge and creative, problem-solving skills. Bentley (1999: 39) suggests the various webs of rules and resources create a 'field of opportunity' or opportunity space within which actors operate. This opportunity space relates both to 'structure' and 'agency'. Agency embraces the way in which actors define and pursue their strategies, objectives and interests. Structure refers to the institutional context within which actors act and which, at any particular moment in time, defines the range of actions available.

Developing this concept of opportunity space, Tiesdell & Adams (2004) propose a model of the potential for better design. The developer's opportunity space is the scope or potential to create a viable development - the larger it is, the easier it becomes to create a viable development. Within this space, developers devise strategies to achieve their objectives. Tiesdell & Adams argue that the developer's opportunity space is framed by three structures or contexts - the physical context (i.e. the development site and its environs); the market context; and the regulatory context (**figure 1**). The boundaries or 'frontiers' of these are best conceived as fuzzy rather than hard-edged – they ultimately depend on the negotiating abilities of the development actors, the social dynamics of their relations and the particular institutional arrangements. Furthermore, while relatively fixed at any time, opportunity spaces are open to transformation over time. Hence, as well as opportunity space, there are changing 'windows of opportunity', as, for example, property markets improve or deteriorate over time.

### Figure 1 – Developer’s opportunity space

(Source: adapted from Tiesdell & Adams 2004: 33)

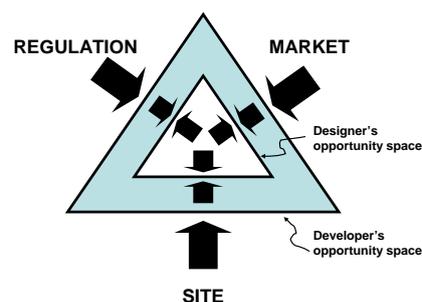


Three external forces define the developer’s opportunity space to undertake viable development:

- **Site context** – moving towards the centre represents a more difficult or constrained site and context
- **Market context** (e.g. the need to create a saleable product) – moving towards the centre represents a more demanding/competitive market (i.e. less producer sovereignty)
- **Regulatory context** (e.g. the need for planning/development consent) – moving towards the centre represents a more constraining regulatory context (i.e. less autonomy)

### Figure 2 – Designer’s opportunity space

(Source: adapted from Tiesdell & Adams 2004: 33)



Within the developer’s opportunity space, a number of development actors compete to establish, maintain and enlarge their opportunity space. For simplicity, interaction here is reduced to that between the developer and the designer. The designer’s opportunity space is constrained by the same forces as the developer’s but also by how the developer filters those forces (the developer’s agency becomes a structure for the designer) and the agency of the other development actors. In general, the more challenging the design task, the more the developer needs a designer’s expertise to achieve viable development.

Within the developer's opportunity space, various other development actors, such as surveyors, architects, engineers working for the developer, compete for their own opportunity space and devise strategies to achieve their objectives. For present purposes, the critical relationship is that between developer and designer (see **figure 2**). The designer's opportunity space lies *within* that of the developer and is subject to similar defining forces, although mediated through the developer.

To further their own interests, designers seek to enlarge their opportunity space by outmanoeuvring developers. For developers, a key issue is the freedom (opportunity) they choose - and have - to give to designers. For designers, it involves how much opportunity space they are given or can appropriate (i.e. by pushing developers) (Bentley 1999: 39). In general, when developers yield opportunity space to designers, the opportunity for better design arises.

Tiesdell & Adams (2004: 34) argue that the more challenging the design task, the greater the developer's corresponding need to use design expertise to achieve viable development, and so, in turn, the more space the developer has to yield to the designer. Nonetheless, a larger opportunity space for the designer does not always translate into better design – designers may, for example, use it to impose their own 'heroic' view. Similarly, enlarging the developer's opportunity space does not necessarily enlarge the designer's opportunity but could reduce it. In the next section, we begin to apply this perspective to understanding the market impact of design codes.

## DESIGN CODES

A useful conceptual distinction can be made between design codes and blueprints. Specifying all aspects of urban space and architectural design, the latter are conceptually similar to blueprints for cars or ships, since, in essence, the proposed development is viewed as a single architectural project. By contrast, by identifying certain principles with discretion permitted, design codes offer structured freedom for developers and designers. Many regulatory systems – building regulations, highways design standards, density and open space standards, etc – have the characteristics of codes, but the key distinction is that design codes are guided by a vision of the intended three-dimensional form of the development (see Carmona *et al* 2006; Walters 2007). Reflecting this distinction, the more common North American term is form-based codes.

Design codes are essentially delivery tools. According to DCLG (2006c: 7), a design code is

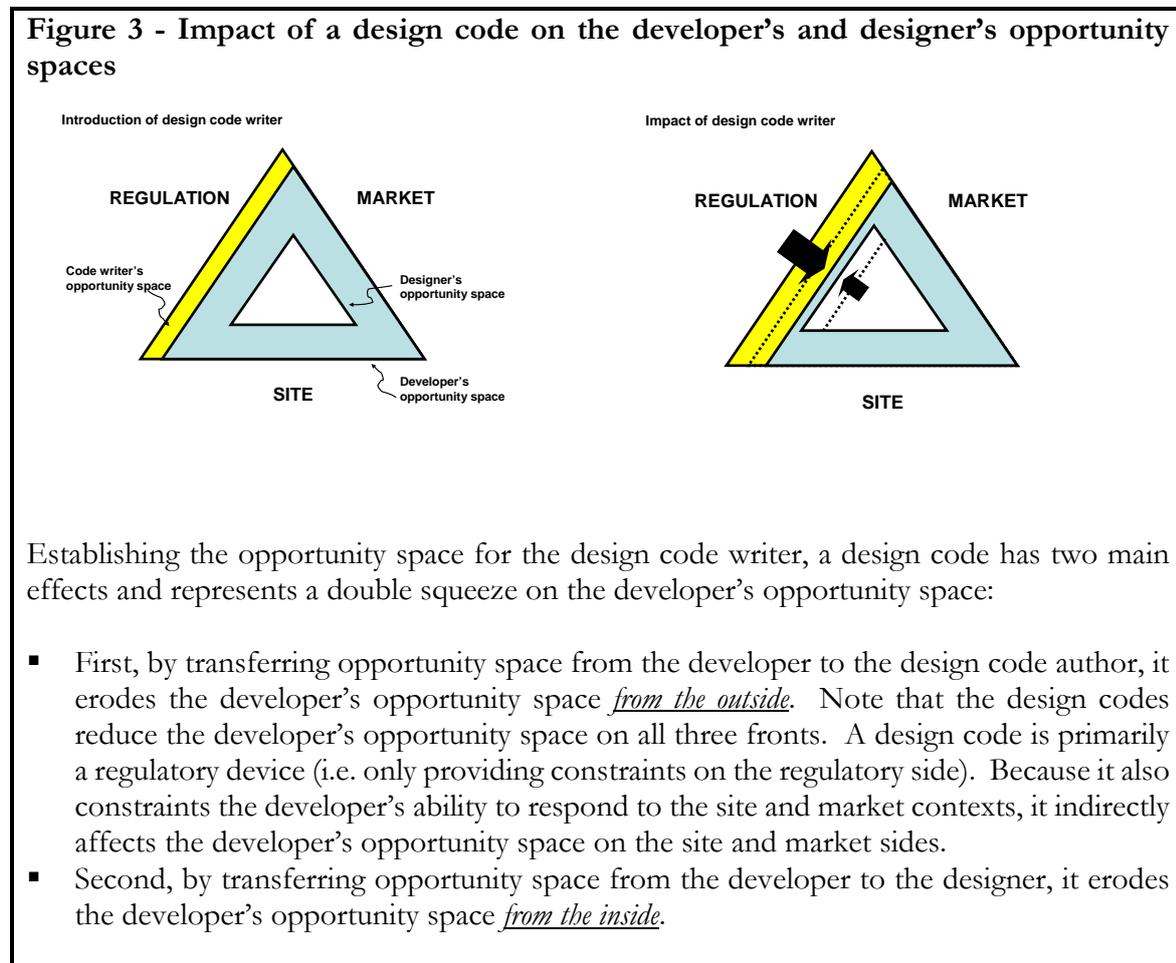
... an illustrated compendium of the necessary and optional design components of a particular development with instructions and advice about how these relate together in order to deliver a masterplan or other site-based vision.

Design codes are often site specific and typically used alongside a site layout plan - usually termed a *masterplan* or *regulating plan*. They may also be commissioned for a larger area. Much US form-based coding now occurs at the district level and thus applies to otherwise unrelated sites.

While some design codes are formally divided into an urban code and an architectural code (Duany *et al* 2001; Carmona *et al* 2003), many incorporate these within a single code. The 'urban' element provides a set of rules about the desired urban/built form (height; massing; placement on site; building lines; heights; etc, which in turn establish specific street and space sections). Commonly based on the region or area's vernacular architecture, the 'architectural' element provides information about the intended visual character (architectural styles or idioms; window proportions and shapes; materials; roof pitches; design motifs; etc). Rather than an architectural design code *per se*, it is an architectural styling or image code. Many design codes also contain landscape and public realm elements. Environmental sustainability elements may also be included.

## Design codes and opportunity space theory

Introducing a design code changes the institutional context within which development actors operate. It also introduces a 'new' development actor – the 'code writer' (i.e. the author/designer of the code), so creating an opportunity space for this actor that affects the opportunity space of both developers and designers (**figure 3**).



Despite being conventionally analysed as a series of tasks for different actors, a single actor often undertakes several development tasks. Development tasks may also be divided among different actors. Two divisions of labour are relevant to the impact of design codes – those in the development and design tasks respectively.

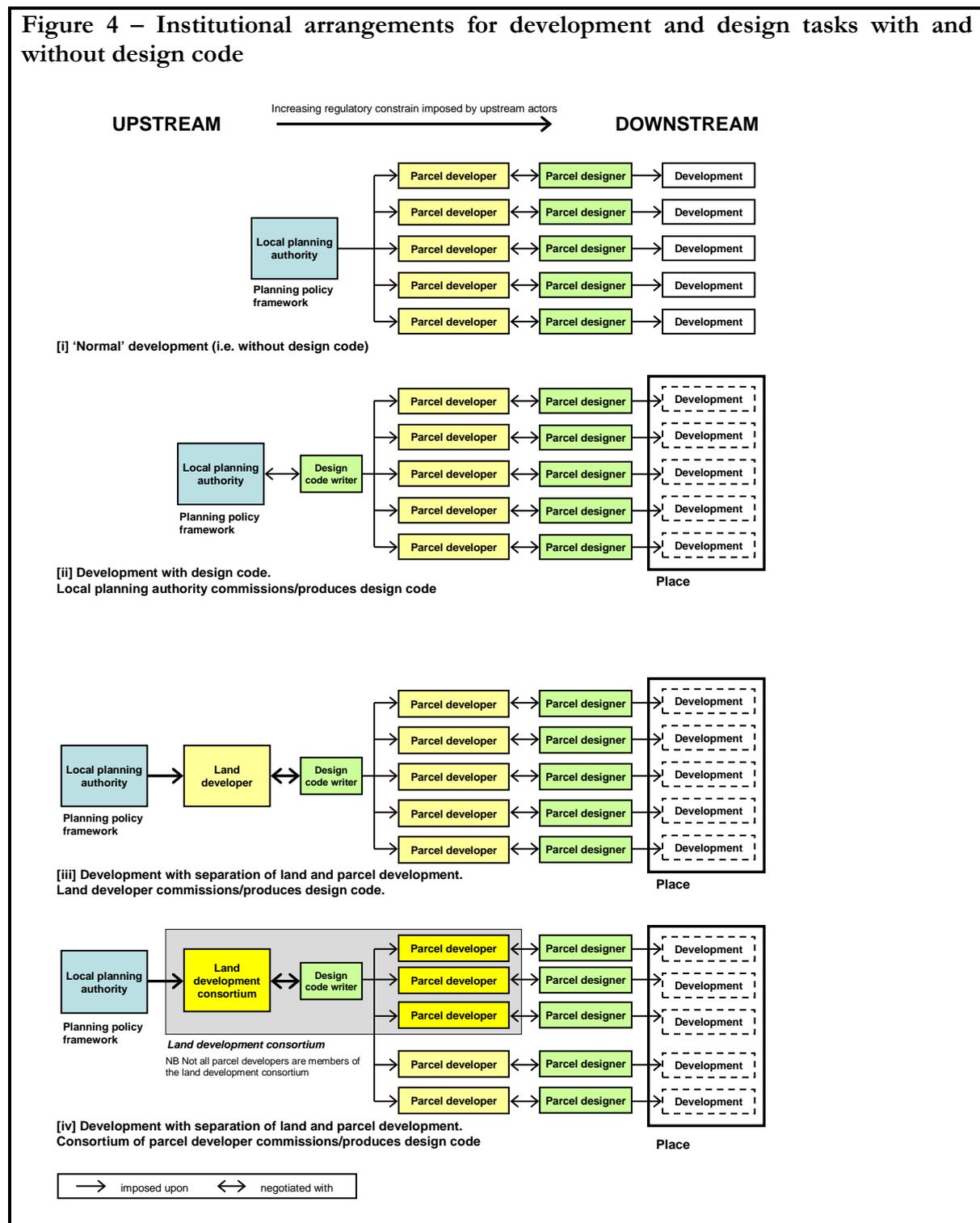
### *The development task*

In the UK, volume housebuilders are both land developers and building developers, but the role of land developer (and the task of land development) and that of parcel (building) developer (and thus the task of parcel/building development) are conceptually separate. **Figure 4** illustrates four different configurations of development and design tasks for a non-design code situation, and for three different design code situations.<sup>1</sup> The design code can be produced by the local authority

<sup>1</sup> The precise configuration will have slightly different consequences in terms of the opportunity spaces of the various development and design actors. Space precludes consideration of the different consequences.

and imposed on both the land developer and the parcel developers (i.e. as an element of public design control) (figure 4ii). Alternatively, it can be produced by the land developer and imposed on the parcel developers (i.e. as an element of private design control) (see figure 4iii).

**Figure 4 – Institutional arrangements for development and design tasks with and without design code**



In the UK, the master-developer/landowner organisation often commissions the code writer. In such circumstances the developer's opportunity space may actually increase since, in its absence, other regulatory instruments, which the developer does not control, may be used (e.g. county

highway standards). In effect, the design code becomes a self-imposed, rather than coerced, constraint. At Fairfield Park – the case study discussed below - there is a more nuanced relation. The land developer was a consortium/partnership which included many of the parcel developers (see figure 4iv). The parcel developers thus formed part of a collective that created a set of rules – the design code – which constrained the actions of its members to achieve the wider objective of a coherent place.

### *The design task*

Introducing a design code divides the design task between the code writer and the designers of buildings/parcels. The code writer's opportunity space mediates between the regulatory context and the developer's opportunity space. Design codes will thus generally restrict the developer's opportunity space but may increase that of parcel designers by requiring developers to yield some of their (albeit diminished) opportunity space to parcel designers. Design codes thus impose a double squeeze on the developer's opportunity space, which is ceded both to the design code writer and, in principle, to designers. However, whether, in any specific instance, the design code actually imposes this double squeeze depends on the particular land development model and the design code's need for active design.<sup>2</sup>

While the design code makes some design decisions, it does not determine the design – it merely reduces the range of choices available to developers (and, in turn, to their designers). While the design code establishes more exacting regulatory requirements, it also reduces the developer's freedom to respond to the market and site context. In this paper, our particular interest is thus on the impact of the design code on the developer's ability to respond to the market context. Hence we focus on two particular research questions, namely:

- What impact do design codes have on the viability of speculative housing? Here we consider how design codes affect development costs and revenues.
- What impact do design codes have on prevalent cultures and practices in the housebuilding industry? Here we consider whether design codes challenge and transform inherited ways of thinking or whether they are implemented with reluctance.

To examine how these issues play out in practice, the paper now reports evidence from a major design coded residential development in south east England.

### **THE CASE STUDY: FAIRFIELD PARK**

The research for this paper formed part of a wider study of housing production and sales strategies, undertaken for the UK Department for Communities and Local Government (DCLG) (Adams & Leishman 2008). Fairfield Park, Bedfordshire, is a former NHS hospital with extensive grounds, where, since 2004, some ten different housebuilders have developed a new residential community of almost 1,200 new homes.<sup>3</sup> Fairfield Park is broadly representative of how the private residential development process operates at a major site in a high-demand location - specifically, a large

---

<sup>2</sup> Whether a design code actually reduces the developer's need for a skilled designer can be debated. It may mean that developers have greater need for designers, thereby compelling the developer to yield opportunity space to the designer. Conversely, by making parcel design seemingly more formulaic, it may mean that developers have less need for designers.

<sup>3</sup> Fairfield Park was also a case study in the research evaluating design coding in the UK commissioned by the Department of Communities & Local Government (DCLG 2006c).

development site in single ownership sub-divided among several builders. As one housebuilder commented: *“By putting more than one builder on a site, you are offering more choice to the consumer, thereby opening the site up to more potential customers.”* The design code ensured that what would otherwise have appeared as a series of separate housing estates, became an apparently more coherent whole.

The research involved gathering substantial contextual data on the development, site visits, detailed telephone interviews with seven of the housebuilders involved at Fairfield Park, and contacting the local planning authority to obtain relevant background information, particularly in relation to the design code.<sup>4</sup>

Close to the Hertfordshire town of Letchworth but just inside the boundary of Mid-Bedfordshire, Fairfield Park is a newly-developed residential community, located about 40 miles north of central London. According to one of the housebuilders: *“... it’s in an ideal location, good for commuter links and it’s a stunning development. It’s a quality location; it’s the sort of location that we look to build in.”* The site was previously occupied by Fairfield Hospital, built in the 1850s. When it closed in 1999, the 70-hectare site, including the Grade II listed hospital building, was sold to Wiggins plc for residential development.

After gaining outline planning permission in 2002 for refurbishment and conversion of the original hospital and comprehensive development of the grounds, Wiggins entered into a joint venture partnership for implementation with Galliford Try, forming Fairfield Redevelopment Limited. Development areas (parcels) were sold off to individual housebuilders, who eventually grew in number to ten as some subsequently sold on parts of their area. However, the partnership retained overall responsibility for masterplanning and infrastructure investment, especially in the provision of roads and sewers. In development terms, it was a land developer. The masterplan also included a new primary school, local convenience store, recreational areas and extensive landscaping. Significantly, the school was seen primarily as a marketing advantage rather than as a development cost. As one company interviewed commented:

... what has been a significant pull for FP is the fact that they have built a junior school. That is a fantastic buying point for parents ... The only way you can go use the school is if you are a resident of FP

## Sales performance

The companies interviewed at Fairfield Park experienced quite varied construction and sales performances. One company, which had built 134 units over a four year period, expressed real satisfaction with having achieved a sales rate of three units per month, which compares well with the typical industry target (see Adams & Leishman 2008) of four per month for greenfield sites. Towards the end of its development period in 2006, its selling prices were £230,000 for two-bedroom units, £300,000 for a three-bedroom ones, £450,000 for four-bedroom ones and £525,000 for five-bedroom ones. The company remarked how homes had been difficult to sell ‘off-plan’ owing to their unfamiliar style and how, as a result, sales had initially been slow. Another company had achieved a sales rate of four per month on a much smaller development. This was

---

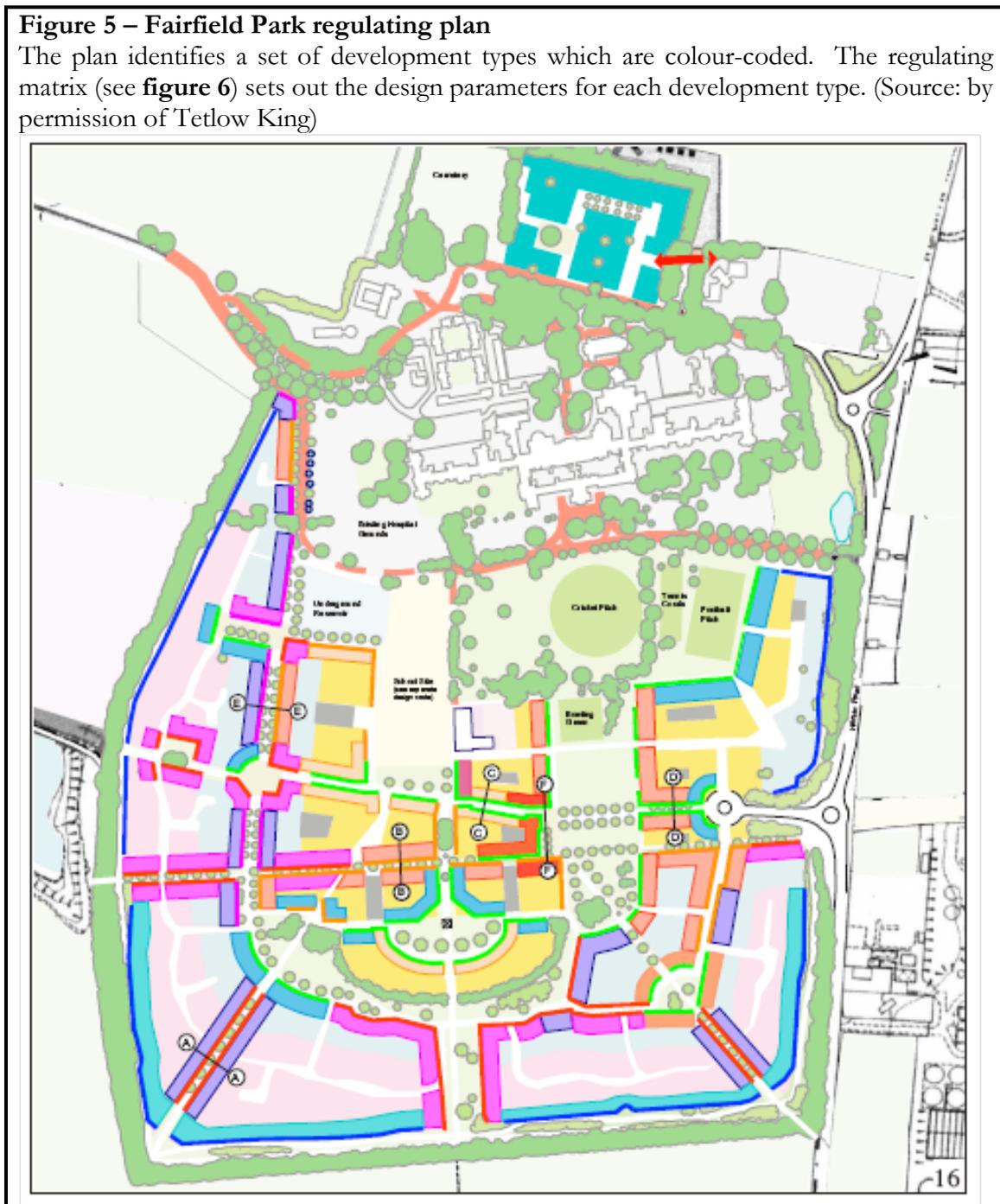
<sup>4</sup> The housebuilders interviewed were Bellway, Bovis, Bryant, Fairclough, Stamford/Linden, Twigden and Wimpey. The other housebuilders were Charles Church/Persimmon, David Wilson Homes and P J Livesey. A key issue here is the extent to which generalisations for the industry as a whole can be made from interviews with seven housebuilders. Four of those interviewed were volume housebuilders (companies with an annual output in each of 2,000 units) and the other three were medium-sized builders (companies with an annual output of between 501 and 2000 units). The companies interviewed collectively built some 26,600 new homes in 2005, or equivalent to about 17% of the 159,480 new dwellings completed in England that year and can be regarded as reasonably representative of the UK’s relatively small number of large housebuilders.

then taken as a reasonable target sales rate by a competitor for another smaller development about to start at Fairfield Park at the date of the interviews.

Other companies experienced greater market difficulty, which they generally ascribed both to the usual difficulty of trying to sell homes on a major development site before facilities and infrastructure were complete and the increased number of competitors once land at Fairfield Park was sold off in smaller parcels. One housebuilder had also relied on what turned out to be unduly optimistic independent market research: as a result of which a sales rate of one per month was achieved compared to the projected three per month. Prices were reduced, at one stage down to £180,000 for a two-bedroom apartment, to accelerate sales.

**Figure 5 – Fairfield Park regulating plan**

The plan identifies a set of development types which are colour-coded. The regulating matrix (see **figure 6**) sets out the design parameters for each development type. (Source: by permission of Tetlow King)



## The urban design strategy

The Fairfield Park urban design strategy consists of a masterplan and a design code, the production of which was a condition of the outline planning consent. Significantly, the local planning authority obtained a contribution from the land development consortium and itself hired consultants Tetlow King to prepare the urban design strategy in its entirety. The LPA thus commissioned the urban design strategy including the design code, but the land development consortium paid for it.<sup>5</sup> Submitted to the council in late 2002, the strategy provided the main basis for controlling the design and layout of Fairfield Park.

The Fairfield Park site slopes gently away from a low central hillock with the listed hospital in the north of the site. The masterplan laid out new development mainly to the south, east and west with a higher density village core surrounding green spaces in front of the hospital buildings, with some units to the north of the hospital (**Figure 5**). Moving away from the central core, there are three density bands – 35-45 dwellings per hectare in the innermost band; 25-35 dwellings per hectare in the intermediate band; and 20-25 dwellings in the outermost band.

A means to deliver the masterplan, the design code was in four sections – ‘built form’, ‘movement’ (the movement hierarchy and surfacing details), ‘open space’ (hard and soft landscaping) and ‘public realm’ (required materials and colours for doors, fences and other public realm structures). The built form section contains three elements:

- ‘Regulating guidance’, which set out a preference for simple housing forms, together with a framework for the size and massing of the built form and its relationship with the streetscene and spaces formed.
- A more detailed framework for a set of ten key building groupings on the main routes through the development and around the main spaces.
- ‘Built form detail’ illustrating window openings, doors, roof eaves and verges found in the locale plus some distinctive details from the hospital buildings, intended to serve as a “... *first point of reference for designers when articulating architectural styling.*” (Tetlow King 2002: 14)

**Figure 6** shows the regulating matrix used in conjunction with the masterplan. Although it was unclear precisely what was mandatory and what was merely guidance, all development proposals had to conform to the general principles of the design code, which is policed by the local planning authority.

Redevelopment commenced in 2004, with almost 450 new homes completed by the end of 2007. When completed, it will comprise approximately 1,200 homes, including 270 in the refurbished hospital building. **Figures 7-10** illustrate the character of the completed developments.

---

<sup>5</sup> In addition, the design code is ‘policed’ by the LPA. The LPA considered that it did not have the resources to police the build out fully, which, *inter alia*, had been to the detriment of the overall place quality (DCLG 2006c: 70). Nonetheless housebuilders wanting to diverge from the design code met resistance from the local planning authority, who upheld the design code.

Figure 6 – Part of the Fairfield Park regulating matrix, showing block types, building heights and set backs (Source: by permission of Tetlow King)

	BLOCK SIZES				STOREY HEIGHTS		SET BACKS		
BLOCK CODE 1 	Terrace 	Semi-detached 			2 1/2 storey  DPC to match to the below 0.5, 0.7 metres	2 storey  DPC to match to the below 0.4, 0.2 metres	 Buildings right to back edge of Development Control parking line (if existing vehicle)		
BLOCK CODE 2 	Terrace 	Terrace 	Semi-detached 	Semi-detached 	Semi-detached 	2 1/2 storey  DPC to match to the below 0.5, 0.7 metres	2 storey  DPC to match to the below 0.4, 0.2 metres	 Buildings right to back edge of Development Control parking line (if existing vehicle)	 Buildings to maximum of 2.5 metres from back edge of footpath
BLOCK CODE 3 	Terrace 	Semi-detached 		Semi-detached 		2 storey  DPC to match to the below 0.4, 0.2 metres	single storey  DPC to match to the below 0.1, 0.2 metres	 Buildings to maximum of 2.5 metres from back edge of footpath	
BLOCK CODE 4 	Terrace 	Semi-detached 	Semi-detached 	Detached 		2 1/2 storey  DPC to match to the below 0.5, 0.7 metres	2 storey  DPC to match to the below 0.4, 0.2 metres	 Buildings left to back edge of footpath or 0.5 metres (whichever less for existing vehicle)	 Buildings to maximum of 2.5 metres from back edge of footpath
BLOCK CODE 5 	Terrace 	Terrace 	Semi-detached 	Semi-detached 		2 storey  DPC to match to the below 0.4, 0.2 metres		 Buildings to maximum of 2 metres from back edge of footpath	 Buildings to maximum of 2 metres from back edge of footpath
BLOCK CODE 6 	Semi-detached 	Semi-detached 	Detached 			2 1/2 storey  DPC to match to the below 0.5, 0.7 metres	2 storey  DPC to match to the below 0.4, 0.2 metres	 Buildings to maximum of 2 metres from back edge of footpath	 Buildings to maximum of 2 metres from back edge of footpath
BLOCK CODE 7 	Terrace 	Semi-detached 	Semi-detached 			2 storey  DPC to match to the below 0.4, 0.2 metres		 Buildings to maximum of 2 metres from back edge of footpath	
BLOCK CODE 8 	Semi-detached 	Semi-detached 	Semi-detached 	Detached 		2 storey  DPC to match to the below 0.4, 0.2 metres		 Buildings to maximum of 2 metres from back edge of footpath	 Buildings to maximum of 2 metres from back edge of footpath
BLOCK CODE 9 	Semi-detached 	Detached 				2 storey  DPC to match to the below 0.4, 0.2 metres		 Buildings to maximum of 2 metres from back edge of footpath	 Buildings to maximum of 2 metres from back edge of footpath

**Figures 7-10 Typical development at Fairfield Park. These are by four different housebuilders (Source: Steve Tiesdell)**



## **THE IMPACT OF THE DESIGN CODE**

As indicated above, the regulatory impact of design codes might be expected to increase the designer's opportunity space and to reduce that of the developer. Does the market impact do likewise? This would occur if design codes increased development costs without adding at least as much to development revenues. Alternatively, might design codes expand the opportunity space of both designer and developer, as a result of adding more to development revenues than costs?

The market impact of design codes is a challenging and largely uncharted field of research that must explore changed agency behaviour not in isolation, but in relation to an altered structural framework. The case study helped enlighten this field by exploring how structure-agency relations are played out when coding creates a design form quite different from that normally produced by UK speculative developers. Typically, a major residential development site such as Fairfield Park would be parcelled out between several housebuilders. Each would set down their individual house types, designed and laid out in no particular relation to each other, but collectively comprising yet another amorphous extension of suburbia. This is because even sites originally in the ownership of a single developer will normally be subdivided and traded between developers to achieve the sales advantage that slightly different development products in the same location are considered to offer. This also reduces risk by ensuring a faster return on capital (Adams & Leishman 2008).

In contrast, the Fairfield Park design code required housebuilders to abandon their standard house types, cede opportunity space to designers and bring similar products to the market, at least in terms of their external appearance. From an agency perspective, we now investigate the potential

impact of this, first, on development costs and, secondly, on development revenues. Then, from the broader structural perspective, we consider how the Fairfield Park design code was turned to marketing advantage. Finally, looking at structure-agency relations, we investigate the potential of design codes to restructure prevalent cultures and practices among speculative housebuilders. The mixed picture that this case study inevitably paints raises important questions for future research, which we highlight in the conclusion to the paper.

### **Development costs: Moving away from standard house types**

The UK speculative housebuilding industry has become highly dependent on standard house types. The largest companies normally have between 20 and 70 standard house types on their books at any one time (Hooper & Nicol 1999). Each standard house type can be varied marginally in external appearance by attaching different finishes and materials to the standard structural design. Cost minimisation and risk reduction are the main advantages of standard house types. On the cost side, they allow materials to be purchased centrally, enable a low-skilled workforce to be employed in construction, and drive down design costs both directly and through blanket building control approval. On the risk side, housebuilders benefit from more accurate cost forecasting and by reliance on ‘tried-and-tested’ designs already known to appeal to consumers. These important advantages were swept away by the Fairfield Park design code, with its emphasis on a strict ‘Victorian-style’ architecture. The research evidence identified three negative cost impacts that developers perceived from the code.

First, the design code demanded higher and more specialist skill levels than those currently existing in speculative housebuilding. As one housebuilder commented:

... they weren’t straightforward typical boxes there. There was a lot of detailing in the brickwork and in the roofs and how they all joined together ... they are all terraces and different storey heights, [requiring] all sorts of detailing which we were lacking when we started the job.

This resulted in undue faults and extra cost in resolving them. Another housebuilder also acknowledged how the skills required at Fairfield Park diverged from those normally employed in the industry, explaining that:

It wasn’t a build that ... any site manager would be familiar with because of the Victorian features. They had, for instance, three metre ceilings and that took specialists. They had chimneys that again our people weren’t familiar with, so chimneys proved a big problem ... There were sash windows and there were all kinds of build problems so the build was delayed and that was the only thing against the sales - that people really wanted to buy them but they weren’t available to buy because the build was so slow.

This point also highlights a second negative cost impact of the Fairfield Park design code for housebuilders. Although, as is subsequently discussed, the product proved popular with consumers, it required a longer construction process. So the switch from standard to more bespoke forms of construction resulted in what the housebuilder quoted above saw as “... *a very, very slow build and a very complex build.*” As a result, “... *everything kept slipping and we kept losing purchasers because of it.*”

The lack of specialist skills and the problematic task of accurately predicting how long houses would take to build created the third negative cost impact: potential purchasers looked elsewhere,

requiring developers to spend more on marketing. In cost terms, these impacts show how hard it can be for development actors to shift from operating in a familiar structural context into one that is untested and uncertain.

The withering of traditional skills in housebuilding has created path dependency on standardised designs. The Fairfield Park design code demanded path departure rather than dependency, at least in construction terms. Departing from familiar paths reduces the developer's relative opportunity space - not least because, during the learning stage developers must yield opportunity space to other development actors, including designers.

### **Development revenues: Advantages of design codes**

In contrast, by broadening the appeal of newly-built homes compared to those available second-hand, the potential revenue impact of the design code expanded the housebuilders' opportunity space. As one housebuilder argued, the more elaborate house styles made Fairfield Park more attractive to those buyers who would not normally consider newly-built properties. Another housebuilder explained why this had occurred:

We did have a lot of people who had only lived in older houses who got on Fairfield and they were quite impressed ... [that] they had actually felt they had been able to change their minds on it. What we offer is something with the qualities and attributes of Victorian properties but without the maintenance aspects.

However, on the negative side, another housebuilder commented that: *"I think the concern is that by having a defined product almost designed by the planners across the development, it meant that each of the builders was building a very similar product."*

In other words, by limiting the scope for housebuilders to differentiate their products, the design code removed the sales advantages of splitting a large development site into different outlets. Nevertheless, the style appeal of homes built at Fairfield Park appears to have helped maximise the premium at which they could be sold above second-hand homes of a similar size.

Although this price premium may have eliminated some purchasers who would might have bought homes at lower prices had Fairfield Park been developed as a standard speculative estate, the overall evidence suggests that the Victorian-style architecture expanded the potential range of purchasers. Unfortunately, in this case, the positive revenue implications of the design code appear to have been outweighed by negative cost implications. One housebuilder commented that: *"I think it's fair to say we don't feel that we've got any significant added value for the expense we've put in."* Another housebuilder, when asked whether the company would use similar style designs at future developments elsewhere, retorted: *"Not by choice. The styles were extremely expensive and difficult to build. Much as I would love to [do this again] from a sales point of view; from a commercial point of view, the answer would be no."*

This would suggest that, until the market advantages of better residential design are perceived by the industry to outweigh the disadvantages, the design agenda will still need to be driven forward by the State.

### **Marketing new development: The potential contribution of design codes**

Speculative housebuilding, at least in the UK, is increasingly marketed as a lifestyle rather than as a physical product. Marketing images for urban fringe locations deliberately promote proximity

to greenspace, with their shots of the country lane, the sunlit golf course, and the leafy nearby landscape - though usually not the bare back gardens with which purchasers will be presented on completion. Indeed, while luxury kitchens and bathrooms commonly feature within marketing brochures, along with artists' impressions of the new properties themselves, little attempt is normally made to market the estate environment as a whole. This is because the idea of living on a newly-built housing estate in the UK has been, at best, neutral in its impact and at worst, quite off-putting.

Design codes offer unusual potential for housebuilders to market the built environment they collectively create as an integrated and attractive whole. Fairfield Park was marketed as a semi-rural village rather than as a housing estate. In this case, the design code helped housebuilders create an integrated brand with its own website and portray a collective image of the development as a place in its own right. One housebuilder explained the collective marketing approach as follows:

Well Stotfold [the park's alternative name] itself is like a lifestyle. If you look at Stotfold as a development it has a typical lifestyle and you have to want to live there, you know. And the prices are higher there because of that lifestyle feel. If you look at the surrounding areas similar properties only a mile or so away were significantly less. It was a certain sort of person that wanted to come there, they like the architecture, they like the feel.

Several housebuilders subsequently used their Fairfield Park developments to advertise their ability more generally to deliver higher quality design in speculative residential development (see also DCLG 2006c: 186).<sup>6</sup>

Nevertheless, some developers were well aware that, while the integrated brand applied externally across the whole development, a choice of a traditional and contemporary internal design had to be offered to broaden the development's market appeal. As one housebuilder commented:

We divided our site into what we call two specifications. One was the Victorian specification which was evocative of the era and indeed the external character of the houses. The other was the contemporary range. We felt that not everybody would want the Victorian feel and we wanted to be able to cater for every possible purchaser who came in, so we divided the properties. We looked at the ones that were very much pseudo-Victorian by the projection of the base or the stone detailing or the sill work. If we felt that if they were much more elaborate Victorian-type properties, then those were the ones that we gave the Victorian spec. Some of the other properties - not just the smaller ones, but often the smaller ones - were plainer from the outside and with those and some of the larger properties, because we wanted a good mix, we gave them a contemporary spec.

By branding the external appearance of Fairfield Park, along with its new primary school, park and community facilities, as somewhere distinctive to which up-and-coming families might aspire, its developers cleverly turned the regulatory imposition of a common design code into a marketing advantage. Without State intervention, speculative housebuilding in the UK does not readily produce places that create attractive marketing images. At Fairfield Park, the land developer paid

---

<sup>6</sup> In addition the local planning authority uses the Fairfield Park development as a quality benchmark during negotiations on other developments. It has also caused a change in the Highway Authority's approach.

for the design code at the behest of the local authority: elsewhere landowners could choose to use a design code without coercive direction from the State.

### **Design codes and development cultures in speculative housebuilding**

The Fairfield Park story suggests that the balance between the advantages and disadvantages of design codes does not yet encourage the industry enthusiastically to embrace and refine this new institutional context for development. But, in seeking to understand the relationship between structure and agency in the development process, it is essential to delve below such broad generalities and see how cultures and practices evolve differently among different agents. Some companies may indeed be at the forefront of change; others may be happier to wait and see what works. At Fairfield Park, there was a clear distinction between housebuilders who had bought into the site and design code at the start of the process and those who joined the development much later, some of whom had not fully appreciated the implication of the code.

It was originally intended that Fairfield Park would be developed by five or six housebuilders. This number grew to ten (one of whom sold under two different brands) as slow early sales persuaded one of the two original companies first involved in the site to sell off large areas to other builders. The other original company, who described Fairfield Park as a ‘fantastic development’ and the ‘jewel in our crown’, explained the advantages of the Victorian-style design code, as follows:

I think the whole development is set up beautifully. The landscaping and the boulevards and the crescents are all maintained by a management company set up specifically to maintain Fairfield Park, which all the developers contribute to. That’s been key as well. Indeed, on every completion at Fairfield Park, we pay a sum of several hundred pounds into the holding company to ensure that everything is kept to a level that it should be ... we’ve got so many people who’ve moved out from London. We’ve also had awards [from] the *Evening Standard* and *Hot Properties* and have won *What House?* awards.

Later entrants did not necessarily share this vision. One housebuilder who had bought land sold off by one of the original companies found it hard to understand why, for example “... *you needed garden walls to obscure gardens and such like from public viewing*”. The housebuilder was unsuccessful in persuading the local authority to drop the requirements for garden walls and they were duly built. As sales competition became more intense, with purchasers able to choose between the products of several different housebuilders, the local planning authority’s refusal to dilute the external demands of the design code encouraged some of the later entrants to cut back on the internal specifications to enable more competitive pricing. The original housebuilder who regarded Fairfield Park as a fantastic development saw the potential contradiction between the design code and the increasingly competitive sales market:

You’ve got ten or twelve developers on the site fighting for the same sales basically. It tends to make the properties less unique. In some cases, [housebuilders] stripped out the spec and dealt on price. I felt that was shame. We didn’t do this because we retained our spec and we hung fast to the concept for the development we had at the beginning.

The Fairfield Park design code transformed what might – at least outwardly - have appeared to be several different housing estates, each designed and built independently according to their particular developer’s speculative house types, into a common Victorian-style brand. Beneath the surface, however, there were serious tensions between the pioneer builders who saw Fairfield Park

as an opportunity to create an environment quite different from the standard speculative housing estate and those who came late in the day, seeing the readily available land as yet another business opportunity. In short, the real test of design codes may thus lie not in their capacity to enthuse the few but to convert the many. Tensions apparent at Fairfield Park indicate that while the State may be able to force the typical speculative housebuilder to abide by a design code, there is still much to be done before coding is enthusiastically embraced by the industry.

## CONCLUSION

This paper has focused on state-market relations in speculative housebuilding, with specific reference to the means by which better residential design can be achieved in new residential developments. By elaborating on opportunity space theory to consider the impact of design codes on the opportunity space of developers and designers, it highlights how changed institutional arrangements affect the agency and interaction of development actors.

The research investigated whether the higher design requirements of design codes assist housebuilders to achieve a better market position by exploiting site potential more effectively. The Fairfield Park design code is prescriptive in terms of urban form, layout and architectural 'style', thereby significantly reducing housebuilders' design choices. By limiting the opportunity for developers to offer different products to the market, the design code removed the marketing advantage of splitting a large development site into smaller parcels. As more housebuilders are introduced to a given locality or site, sales rates may suffer if developers do not retain the ability to differentiate their product through control over design and specification. The findings implied that where firms have insufficient control over development mix and specification, even major developments cannot sustain too many different housebuilders.

Balancing this, however, is the benefit of a more predictable built outcome which yields other benefits, such as creating a more integrated and synergistic development. It is notable that the design code's impact on overall place quality seems to be accepted with comments from housebuilders regarding design focusing predominantly on architectural style and construction costs. To answer our first research question, the design code's value in creating a marketing brand by which traditional design helped the development compete more effectively with the second-hand market enabled premium prices to be charged, but, conversely, also imposed additional construction costs.

Turning to our second research question, which concerned the impact of design codes on the prevalent cultures and practices of housebuilders (and, in turn, on their core business strategies), it became apparent that some of those originally involved at Fairfield Park demonstrated real commitment to a culture of design quality. The attitudes and behaviour of these pioneers, however, did not necessarily represent a culture shift in the industry as a whole, or even in their own companies.

The research also suggests that the design code worked more by forcing change upon developers, than by encouraging them to see its commercial benefit. In other words, it was the 'stick' of regulation - rather than the 'carrot' of enhanced design quality - that ensured compliance with the design code. This suggests that any change of design practices at Fairfield Park was a one-off response rather than fundamental change to the housebuilders' core business strategies.

Accordingly, two areas are suggested for further research. The first area relates to housebuilders' attitudes to the value, benefits and costs of design, into which further insights could be achieved by studying the power relations of housebuilders and their designers – that is, both the developer-

designer nexus, and the design code writer-designer nexus as mediated by the developer. The second area relates to how design codes affect housebuilders' core business strategies with respect to design – that is, whether experiences such as Fairfield Park are able to produce deep-seated change. Here, the real test would be housebuilders' subsequent design practices on sites not subject to the discipline of a design code. This requires a longitudinal study since the novelty of a design code might mean housebuilders have a learning period during which they need to employ skilled designers, but thereafter can adapt their business practices to reduce this dependence.

## REFERENCES

- Adams, D & Leishman, C (2008) *Factors Affecting Build Out Rates*, Report to Department for Communities and Local Government, London
- Ben-Joseph E (2005) *The Code of the City: Standards and the Hidden Language of Place Making*, MIT Press, Cambridge, Mass.
- Bentley, I (1999) *Urban Transformations: Power, people and urban design*, Routledge, London
- CABE (2004) *Housing Audit 2004: London, the South East and East of England*, CABE, London
- CABE (2005) *Housing Audit 2005: North East, North West and Yorkshire and Humber*, CABE, London
- CABE (2006) *Housing Audit 2006: East Midlands, West Midlands and the South West*, CABE, London
- CABE (2003) *The Use of Design Codes: Building Sustainable Communities*, CABE, London
- Carmona, M; Marshall, S & Stevens, Q (2006) 'Design codes: Their use and potential', *Progress in Planning* **65** (4), 209-289
- Carmona, M; Heath, T; Oc, T; & Tiesdell, S (2003) *Public Places Urban Spaces: The Dimensions of Urban Design*, Oxford: Architectural Press
- DCLG (2006a) *Planning Policy Statement 3: Housing*, DCLG, London
- DCLG (2006b) *Preparing Design Codes: A practice manual*, RIBA Publishing, London
- DCLG (2006c) *Design Coding in Practice: An evaluation*, DCLG Publications, London
- DETR (1998) *Places, Streets and Movement*, DETR, London
- DETR (2000a) *Planning Policy Guidance Note 3*, DETR, London
- DETR (2000b) *By Design: Urban Design in the Planning System; Towards Better Practice*, DETR, London
- DETR (2000c) *Our Towns and Cities: The Future: Delivering an Urban Renaissance*, DETR, London
- DTLR/CABE (2001) *By Design: Better Places to Live: A Design Companion to PPG3*, DTLR/CABE, London
- Duany, A & Plater-Zyberk, E with Speck, J (2000) *Suburban Nation: The rise of sprawl and the decline of the American Dream*, North Point Press, New York

- Essex Planning Officers Association (EPOS) (1997) *A Design Guide for Residential and Mixed Use Areas*, EPOA, Essex
- Hall, T (2007) *Turning a Town Around – A proactive approach to urban design*, Blackwells, Oxford
- Hardy D (2005) *Poundbury, The Town that Charles Built*, Town & Country Planning Association, London
- Hooper, A & Nicol, C (1999) 'The design and planning of residential development: standard house types in the speculative house building industry', *Environment & Planning B: Planning & Design*, **26** (4) 793-805
- CABE & House Builders Federation with Design for Homes (2003) *Building for Life criteria*, accessible at <http://www.buildingforlife.org/>
- Parolek, D G; Karen Parolek, & Crawford, P C (2008) *Form Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers*, John Wiley & Sons, London
- Roger Evans Associates (REA)(2007) *Delivering Quality Places - Urban Design Compendium 2*, English Partnerships & The Housing Corporation, London
- Tetlow King (2002) *Urban Design Strategy: Fairfield Park*, Tetlow King, Romsey
- Thompson-Fawcett, M & Bond, S (2003) 'Urbanist intentions for the built landscape: examples of concept and practice in England, Canada and New Zealand', *Progress in Planning*, 60 (2), 147-234
- Tiesdell, S & Adams, D (2004) 'Design matters: Major house builders and the design challenge of brownfield development contexts', *Journal of Urban Design*, **9** (1), 23-45
- Urban Task Force (1999) *Towards An Urban Renaissance*, Spon Press, London
- Walters, D (2007) *Designing Community: Charrettes, Masterplans and Form-based Codes*, Architectural Press, Oxford