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# SMART PARCELISATION AND PLACE DIVERSITY: RECONCILING REAL ESTATE AND URBAN DESIGN PRIORITIES

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## Abstract

This paper examines the meaning and significance of place diversity and explores how its achievement may well depend on specific institutional relations between different actors in the real estate development process. It calls for master developers to engage in the ‘smart parcelisation’ of large development sites through design-sensitive subdivision, reflected in conditions attached to plot sales or leases. By looking at practical examples, it explores how this concept could refashion speculative housebuilding in the UK. The paper highlights the potential and limitations of ‘smart parcelisation’, while emphasising the need to link development and design considerations in future policy and research agendas.

## Keywords

Diversity, land parcelisation, masterplans, real estate development, speculative housebuilders

## INTRODUCTION

Urban design theorists and policymakers alike have long identified diversity as one of the key determinants of successful places (Jacobs 1961; Fainstein 2005; Talen 2006). Yet, the design principles and actions required to enable more diverse places remain fundamentally at odds with the dominant philosophy of contemporary real estate development (Love 2009; Tarbatt 2012). This is particularly acute in the UK, where the speculative housebuilding industry favours uniform single-use residential development (Hooper and Nicol 2000). In this paper, we argue that urban designers who merely articulate the value of diversity are likely to achieve little unless they are able to understand, challenge and transform the apparent logic of the speculative housebuilding industry. We thus explore definitions and interpretations of ‘diversity’ before emphasising the limited interest of most speculative housebuilders in urban design and the principles of diversity.

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<sup>1</sup> This paper emerged from research and discussions with Steve Tiesdell between 2009 and 2011 and draws especially on notes and diagrams prepared by him prior to his death in June 2011. The paper is indicative of much of Steve’s thinking in the final few years of his life, during which time he increasingly came to see the importance of effective delivery to urban design. It is thus hoped that the final version of this paper properly reflects Steve’s ideas about the potential benefit of smart parcelisation

To achieve the development of more diverse places, we argue, requires an understanding of how the role of the ‘master’ or ‘land’ developer differs from that of the ‘parcel’ developer. We show how master developers can promote diversity through masterplans that subdivide large development sites into smaller parcels, the development of which they then regulate by means of design controls, attached as conditions to the sale or lease of individual parcels. This is the process we term ‘smart parcelisation’. By exploring its operation at one exemplar UK development, we show how smart parcelisation can recast the power relations of speculative housebuilding in the pursuit of place diversity. In the final section, we reflect on the potential of smart parcelisation as an effective linkage between design and development.

## **PLACE DIVERSITY IN URBAN DESIGN**

Diversity “resonates with the western ideal of a meritocracy” (Tarbatt 2012, 14) by enabling all members of a society to participate equally in democratic life. For today’s planners and urban designers, it has an added spatial dimension that can be traced to critical assessments of Modernist city design during the mid-twentieth century (Talen 2006). In *The Death and Life of American Cities*, Jane Jacobs (1961) eloquently challenged the Modernist ideology and highlighted its destructive impact on traditional city neighbourhoods. Famously guided by her observations of street life, she argued that four interlinked ‘generators of diversity’ – mixed land uses, short urban blocks, building variety and dense concentrations of people – were crucial elements of a successful place, yet the very antithesis of the Modernist city that favoured segregated land uses, freestanding buildings and auto-centric movement corridors.

Although Jacobs’ concept of diversity has been criticised for encouraging gentrification (see, for example, Zukin 2010), it continues to guide much contemporary planning and urban design practice (Grant and Perrott 2009). Yet, as Fainstein (2005) notes, definitions of diversity vary. City planners, she suggests, are typically concerned with *social* diversity among different class, ethnic and cultural groups and, therefore, the socio-economic impacts of housing tenure, unit size and neighbourhood accessibility. In contrast, urban designers are generally more interested in *physical* diversity and how this might be achieved through mixed use buildings, street and block dimensions, and other physical elements of built form.

The direction of causality between social and physical diversity remains controversial (Fainstein 2005). It creates a particular challenge for urban designers since many of the ‘cure all’ physical prescriptions that were historically identified for cities, especially in the Modernist era, have left sceptics wary of form-based solutions. In this context, Talen (2006) argues that reflections on the physical failings of Modernism have contributed to a positive dialogue about the social diversity of cities and, in particular, around community engagement in the planning process. Yet, fearful of past mistakes, such ideas have rarely been translated into urban design principles, leaving theories on the physical diversity of cities underdeveloped. Talen makes an alternative case for ‘place diversity’, arguing that physical diversity can, and should, support and nurture social diversity. Like Jacobs – for whom physical design was crucial – Talen contends that design can be harnessed to create an accessible public realm, encourage social and economic exchange and enable innovative mixed housing tenures. Even architectural variety, she argues, can be “...seen as a way of promoting multiculturalism” (2006, 245).

In practice, a place diversity agenda is often achieved through mandatory controls that require developers to follow stringent design guidelines. However, using enhanced planning powers to foster place diversity is controversial (Kelbaugh 2000; Ellis 2002). Proponents have long argued that improving the physical layout and appearance of the built environment, often through artistic means, fosters a structured civic ideal (Sitte 1889; Cullen 1961; Bacon 1967). New

Urbanism reflects this thinking with its practitioners employing prescriptive design controls to encourage compact city design and hierarchical physical arrangements. For New Urbanists, such meticulous design can facilitate social interaction and produce a “measurably positive effect on sense of place and community” (Kelbaugh 2000, 285).

Conversely, others see prescriptive design controls as inhibiting social and physical diversity and unnecessarily precipitating order in the built environment. The architect Rem Koolhaas (1995), for example, celebrates the fragmented and disconnected city, arguing that this provides a more truthful representation of contemporary society. Drawing a comparison with New Urbanism, Kelbaugh (2000) describes Koolhaas’ perception of the city as ‘Post Urbanism’. Distrusting order, Koolhaas makes “little reference to physical or historical context” (Kelbaugh 2000, 286) and welcomes the bombastic mixture of avant-garde buildings and generic shopping malls.

In this paper, we more readily accept Talen’s argument that place diversity requires some form of design control and thus share Kelbaugh’s view (2000) that ‘Post Urbanism’, while visually exciting in theory, tends in practice to reproduce the car-focused ‘placelessness’ reminiscent of Modernism. We contend that the opposite of order is not necessarily diversity, but drabness and monotony (Adams and Tiesdell 2013). We suggest that targeted design controls can make an important contribution to achieving greater place diversity within large-scale residential developments.

## **DIVERSITY, MASTERPLANNING AND THE ‘URBAN RENAISSANCE’**

In the UK, the importance of place diversity and, in particular, the co-dependence of physical and social diversity, emerged under New Labour’s ‘urban renaissance’ agenda. As Tarbatt notes, “mixed housing tenures and mixed uses are now seen by policymakers and urban designers alike as vital features of successful places and sustainable communities that need to be preserved” (2012, 15). *Towards an Urban Renaissance*, the influential report of the Urban Task Force (1999), outlined how higher quality urban design and, in particular, the skills of gifted designers could deliver more socially and physically diverse places. The report argued that innovative design solutions, such as the concentration of public facilities, the inclusion of commercial uses within housing districts and making public transport more accessible, could lead to the “mixing of different activities within an area” and the strengthening of “...social integration and civic life” (Urban Task Force 1999, 40).

Another influential government document, *By Design* (DTLR and CABE 2000), identified ‘diversity’ as one of seven core objectives for place-making. It noted that diversity could be achieved through mixing compatible land uses that “work together to create viable places that respond to local needs” (Adams et al. 2011, 15). Further urban design guidance emphasising place diversity also followed in the devolved regions of the UK, including *Designing Places* (Scottish Executive 2001) and *A Model Design Guide for Wales* (Planning Officers Society for Wales 2005).

Talen (2006, 243) suggests that creating more functionally diverse places demands a rigorous planning process and enhanced design controls to “ensure compatibility and acceptance”. This highlights the importance of masterplanning as a plan-led method for coordinating large- and medium-scale development and encouraging more robust, mixed use environments (CABE 2004). A masterplan typically starts as a set of conceptual sketches, ideas and options, developing over time into a comprehensive design-led development framework. In this context, Tiesdell and Macfarlane (2007) make the important distinction between ‘blueprint’ and ‘coded’ masterplans. Blueprint masterplans treat a proposed development, however large, as a single architectural

project controlled by a solitary (meta) designer who prescribes a specific outcome over all aspects of urban space and building design. The masterplanner is engaged in what George (1997) defines as a ‘first-order’ design activity, where the relationship between the designer and the built product is obvious and direct. Aside from some notable exceptions, such as the Prince of Wales’ model village at Poundbury, blueprint masterplans are rarely used since spatial, temporal and financial uncertainties make it almost impossible to maintain an ongoing commitment to a pre-defined product.

In contrast, ‘coded’ masterplans prescribe important principles while permitting subsequent discretion (Tiesdell and Macfarlane 2007). A spatial development framework is created that “offers structured choice and flexibility with degrees of freedom for developers and designers,” each of whom have “scope to contribute to the richness and variety of the resulting place” (Tiesdell and Macfarlane 2007, 408-409). Re-using George’s (1997) terminology, this transforms the task of the masterplanner from one of ‘first-order’ to ‘second-order’ design. Coded masterplans work by structuring the decision-making environment within which real estate developers, investors, architects and other development actors operate. To explore the potential and limitation of coded masterplans, we now consider what typically drives decision-making within the speculative housebuilding industry.

## **PLACE DIVERSITY AND SPECULATIVE HOUSEBUILDERS**

The impetus for design aware masterplanning in the UK was heavily influenced by poor standards of design and place monotony evident especially in speculative housing projects (Tiesdell and Adams 2004). In contrast, the Urban Task Force noted that in the Netherlands, Germany and Spain “Houses and apartments – built by the private and public sector alike – are designed to much higher architectural and environmental standards” (1999, 67). It suggested that the UK’s quality deficit had little to do with architectural aesthetics or the use of expensive materials. Rather, it revealed a lack of understanding about the ‘fit’ between housing design and user requirements. In this context, Hooper and Nicol (2000) reveal how standard house types and repetitive site layouts are used almost universally by major UK housebuilders as they require minimal “non routinised building work” (2000, 269), with little spent on design and masterplanning. Typically, housebuilders employ technicians, rather than skilled designers, to produce housing and site layouts. Their design interest rarely extends beyond the ‘kerb appeal’ of individual dwellings and the repackaging of standard boxes in repetitive arrangements (Tiesdell and Adams 2004).

Government promotion of place diversity in the UK met with mixed success. Guidance released during the development boom of the early-2000s certainly caused “...a step change in prevalent thinking on the quality of residential development” (Tiesdell and Adams 2004, 27). This was most evident on brownfield sites, especially with large mixed-use city centre projects (Punter 2010). Although not universal, policy requirements persuaded housebuilders to employ skilled designers to tackle complex urban locations and generate site-specific solutions (Tiesdell and Adams 2004). Yet, outside major urban centres, the design agenda had less impact and the overall quality of housing development hardly changed (Brain 2008; Punter 2010).

Despite tightening regulation, the UK housebuilding industry has generally failed to alter its business model to address place diversity. Standard house types, singular land uses and aesthetic homogeneity remain the industry’s staple. According to Payne (2013), the industry’s innate conservatism reinforces its longstanding antagonism to the State over housing supply. Punter (2010) argues that, as the industry slowly recovers from the financial crisis, there will be every

incentive to economise on internal space and construction quality by continuing to reproduce standard house types and to minimise investment in the public realm.

This makes it crucial to explore how the varied actors involved in masterplanning can best promote design quality and the principles of place diversity. Specifically, in turning to this issue, we argue that a masterplan should provide an effective framework for ‘smart parcelisation’ by embedding design within any plan specifying the intended subdivision of land for the purposes of sale or lease.

## DESIGN AND DEVELOPMENT ACTORS

The distinction between actors and roles in the development process is a crucial one (Adams and Tiesdell 2013). Actors are the named individuals and organisations, such as specific development companies, financial institutions or local authorities. Roles are the parts that actors play in the development process, such as those of landowner, regulator, occupier, investor or developer. Any single actor may play more than one role within a development project and, crucially, these roles may conflict with one another. A good example of this is when a local authority acts as landowner, developer and regulator for the same development.

Figure 1 specifically illustrates the activities carried out by real estate developers and highlights four distinct roles they typically play. The *master or land developer* operates at a strategic level to first ‘masterplan’ and then ‘subdivide’ a development area into smaller parcels, which might then be assigned to different *parcel developers*. The *infrastructure provider* is responsible for the provision of roads, sewers and other major services across the entire development area, while the *building contractor* constructs the actual houses, shops, offices, etc. It is important to note that these roles are not necessarily played by four different development actors. Whether and how the roles are combined varies from one development to another and from one country to another (Adams and Tiesdell 2013).

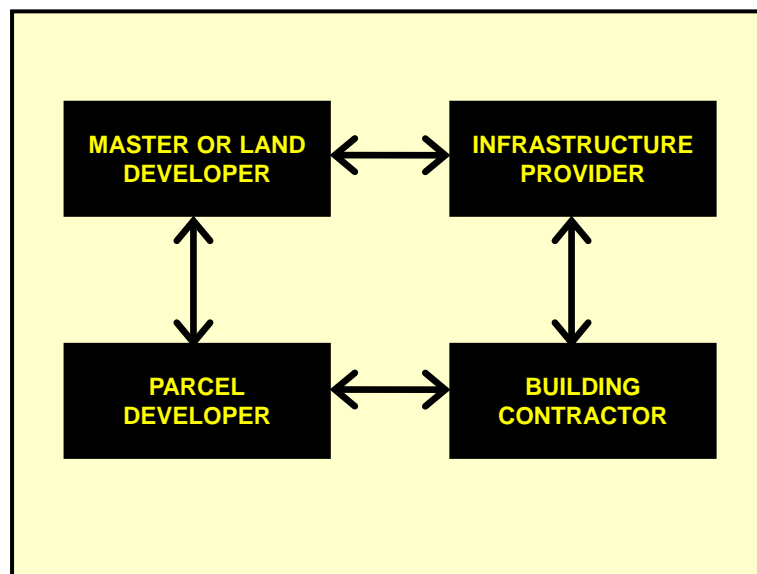


Figure 1: Four roles potentially played by real estate developers

In the UK, speculative housebuilders usually integrate all four roles within a single organisation, with the largest now termed as “super builders” (Payne 2013, 39). This minimises costs and maximises efficiencies and provides the rationale for the standardised approach to design. At some point, however, development sites become too large even for single housebuilders. Occasionally, a group of housebuilders come together in a development consortium to masterplan a large development area (usually at the insistence of the local planning authority), but such arrangements tend to be the exception rather than the rule. Instead, most large development sites in the UK are quickly subdivided through trading arrangements between several housebuilders, each of whom acts as master and parcel developer on their own part. With no strategic framework, this usually results in poorly-co-ordinated development and the late or under-provision of essential infrastructure.

This is well illustrated by Hall’s (2007) account of greenfield development on the edge of Chelmsford, Essex, which shows how the various parcels within a major development area are often planned and developed separately, usually without any masterplan and design code. Although a schematic location plan may indicate how different parcels relate to each other as well as to any planned facilities, this neither regulates the finer subdivision of land nor encourages a prescriptive approach to urban form. Whatever its label, it acts primarily as a pragmatic record of what has already been agreed rather than a true masterplan.

The separation between master and parcel developer is typically more distinct in countries with zoning-based systems. In the US, for example, different private actors frequently undertake the roles of master and parcel developer, a process common in many New Urbanist projects (Katz 1994). Conversely, in some northern European countries, such as the Netherlands and Sweden, the local authority often controls the land, organises the infrastructure and recoups its investment by selling serviced plots to parcel developers (Adams and Tiesdell 2013). IJburg, a major new extension to Amsterdam, is an example of where this method enhanced place diversity. The municipality acted as master developer, reclaimed the area from the sea and installed physical and social infrastructure (including a tram extension) before recovering its costs by selling serviced plots to developers (Adams et al. 2011). At Hammarby Sjöstad, a 200 hectare mixed use neighbourhood in Stockholm, the city council also conceived, delivered, financed and managed an entire masterplan with associated infrastructure to ensure environmentally-friendly development (Love and Crawford 2011). Over time, the council invested about €500 million in land assembly and infrastructure, but subsequent parcel sales to private developers generated around €3bn of investment (Adams and Tiesdell 2013).

Falk (2011) contends that the approach adopted in the Netherlands and Sweden reduces financial risks for private sector developers, results in quicker completion and leads to increased design quality and diversity. When the roles of the master and parcel developer are kept separate, the master developer has an explicit financial interest in creating strong competition among parcel developers for serviced sites. By ensuring that each parcel makes its own positive contribution to the quality of the overall area, the master developer can secure higher prices for parcels sold later, and so benefit directly from increased land values. This transforms the master developer into a ‘place promoter’ with the clear determination to achieve place quality and ensure that the necessary physical and social infrastructure is provided as an integral part of the overall development (Adams and Tiesdell 2013).

## **THE VALUE OF PARCELISATION**

The financial imperative of real estate development is crucial to achieving place diversity on large projects. As the previous examples attest, taking a deliberate decision to broaden the number and

type of developers and designers involved in implementation can help to reproduce what Love and Crawford (2011) call the authentic character and economic variety of the ‘real’ city, which they associate with intricacy, diversity and density. They argue that the layout of city streets and infrastructure should shape the blocks and outdoor rooms that follow, thus creating the design conditions for a diverse, but ordered arrangement of land uses and buildings. So, while land ownership may need to be consolidated to facilitate integrated development, any such development should be masterplanned to enable future land ownership to be distributed, rather than retained by only a few development actors. This is why the concept of mixed use is not simply about diversity of activity and land uses, but also about diversity in development form, tenure, market segmentation and density (Roger Evans Associates 2007). With this in mind we make two important claims.

First, we suggest that the fewer the number of actors involved in any large development project, the more uniform the built product. If a single developer and a single designer are responsible for all the parcels within a large development, the process will be simplified but the urban form may have little variety. Increasing the number of designers and/or developers makes the process more complex but has the potential to produce a richer and more diverse urban form.

A formidable example of this can be found at Borneo Sporenburg on Amsterdam’s eastern docklands. Here, over 100 architects were involved in the design of small and medium land parcels within the wider masterplan produced by the landscape architects West 8. In reviewing the project, Love and Crawford (2011, 111) note that it “proposed a highly rationale and transferable planning logic that builds in specificity and variability of parcel size so that a range of scales of development are not only possible, but also required”. The project was financially viable because the parcel and plot developers used lower cost construction materials and maximised the allowable densities. Borneo Sporenburg stands in stark contrast to the *modus operandi* of the UK speculative housebuilding industry where, as previously outlined, developers are culturally inclined to reproduce the same products.

Our second claim is that to achieve increased land values and deliver infrastructure efficiently, the master developer must ensure efficient phasing. A master developer who controls land ownership can release parcels sequentially insisting on high standards of design quality from the start that then set the benchmark for the remainder of the project. The pace of release can be managed directly in response to changing market conditions to avoid over supply. A strategically-phased implementation process can also match primary infrastructure provision to the release of land parcels. This stands in contrast to what might be described as the ‘scattergun’ approach in which the parcels built first are those first purchased by various developers, or where regulatory approvals or development finance are easiest to obtain.

With scattergun development, there is not even an ‘invisible hand’ to ensure overall control. Punter’s case study of Cardiff Bay is instructive here, since he shows how “The fragmented nature of development, and its poor integration with existing communities, has undermined efforts to create a safe, attractive public realm” (2007, 398). Significantly, the development corporation leading the project could have used its land ownership powers to avoid this outcome but ownership control was rarely deployed to ensure quality design. As a result, the corporation was unable to deliver its Inner Harbour development brief, which proposed close-grained, mixed-use and perimeter block development on ‘urbane’ avenues. This brief, which was prepared by an American urban designer, failed to anticipate the well-established UK tradition by which separate commercial buildings are normally designed and constructed independently by separate developers. The development corporation thus resorted to identifying major sites with extensive surface car parking that could be easily marketed individually.



In Figure 2, we show conceptually how the phased development of one large site by a single developer differs from its simultaneous (i.e. in parallel) or sequential (i.e. in series) build-out by multiple developers. The involvement of multiple actors needs to be matched by institutional arrangements that enable the increased co-ordination costs to be offset by increased value gained from effective place-making. Ultimately, rather than “artificially induced variety conjured by compositional effort”, a multi designer/multi-developer phased project “... designed by many hands will result in true variety” (Love 2009, 215-216). Indeed, Brain argues that instead of a single designer “working stenographic effects by fiat”, the aim is to produce “... cumulative effects of genuinely individual architectural statements – as an open conversation and not simply a scripted dialogue” (2008, 253). Smart parcelisation, to which we now turn, can provide the basis for this.

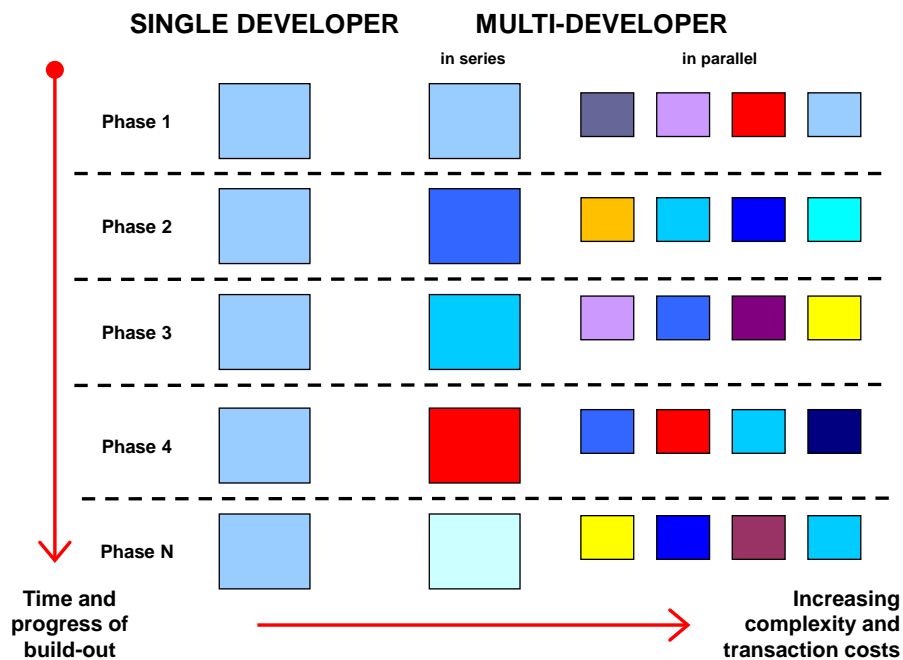


Figure 2: The potential complexity of multi-developer projects. On the left hand side of this diagram, the same developer takes responsibility for all the phrases of a large development. In the middle, each phase becomes the responsibility of a different developer, who work in series to build out the site. On the right hand side of the diagram, each phase is split up into several parcels, with each being the responsibility of a different developer. Some developers secure parcels in more than one phase. This produces a richer and more diverse urban form, but the benefits of this approach have to be balanced against increased complexity and transaction costs.

## TOWARDS SMART PARCELISATION

As already intimated, most large developments are typically organised into a series of smaller projects to be implemented over different time frames, often by different developers and designers. This is why Love and Crawford (2011) call for a parcel map to form part of the master plan vision and determine subsequent development. They argue that “The size and distribution of the parcels indicates the typology of buildings that can reasonably participate in the build-out. A careful parcel map, along with a set of regulatory guidelines, can and should be used as the primary tool with which to craft the character of successful new urban districts” (Love and

Crawford, 2011, 93). Taking this idea forward, we propose that place diversity can be more readily achieved when the design principles reflected in the parcel map are embedded within subsequent sale or lease conditions. This is the essence of ‘smart parcelisation’ since it ensures that land sub-division is not left to chance, or determined by the particular market pressures of the moment, but is planned intelligently, deftly and judiciously as an integral part of masterplanning and with the positive intent of generating place diversity.

Here, we must distinguish between what might be termed ‘convenience parcelling’ intended simply to enable ‘efficient’ real estate development and ‘place-making parcelling’ which is more strategic, purposive and sophisticated. This turns the parcel map into a policy instrument intended to ensure the creation of a quality place with diverse form and function. Smart parcelisation privileges place-making above the short-term (and often place-blind) logic of real estate development since it reflects the belief that creating a quality place is the best way to deliver long-term value to both users and investors.

Land parcelisation strategies affect the size of developer willing to participate and thus alter built outcomes. Smaller developers often prefer small parcels. Owing to the scale of their operations, larger developers may need larger parcels to gain sufficient economies of scale. Smaller land parcels spread the risk of one developer proceeding slowly or running into problems, and increase consumer choice. Smart parcelisation provides the means to enable participation by diverse developers, hopefully with different designers. In Figure 3 we show four common approaches to parcelisation, which we explain below.<sup>2</sup> These are based on traditional urban block structures and indicate how parcels can be defined by plots, streets, blocks or multi-blocks.

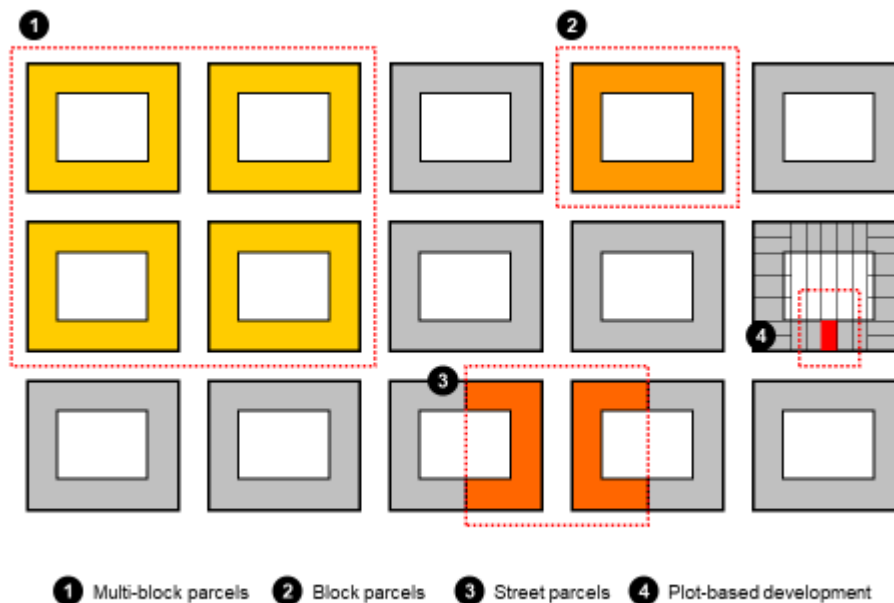


Figure 3: Four approaches to land parcelisation

Plot-based parcelisation creates development opportunities for individuals and smaller developers. To prevent undue incursion by larger actors, limits may be set on the number of contiguous plots that can be bought by the same developer and/or on the total number of plots any one developer can purchase in a single block (Tarbatt 2012). To succeed, plot-based

<sup>2</sup> These four prototypes were originally developed by Steve Tiesdell as reported in Love and Crawford (2011)

development requires the necessary capacity within the development industry and associated financial services sector. Although plot-based development tends to struggle in the UK because of the lack of such capacity, it is popular in much of Europe. At IJburg, for example, a range of plots sizes (and form codes) were used to ensure a mix of 4-5 storey narrow townhouses, 3 storey (wider) terraces and 2-3 storey detached, semi-detached and terraced houses, with styles ranging from mock seventeenth century to ultra contemporary. This highly diverse range of building types was achieved through small building plots, a strong self-procurement mentality and by setting limited rules about overall form (such as on overall height, height of ground floor ceiling, building line, etc.) within which designers had significant freedom.

Street-based parcelisation makes the street the centre of the design, rather than the edge of the developer's site, and seamlessly links both sides of the main street. This means that it is less obvious where one land parcel stops and another starts. It also requires parcel developers to build more of the infrastructure, which in turn reduces the need for the master developer to fund extensive infrastructure upfront.

Block-based parcelisation creates a development parcel from each single street block. Arguably, this can bring greater overall coherence to the design of streets. Within the blocks, there may be some prescription, some combination of prescription and discretion, or no prescription at all allowing the block to be built out as the developer and designer see fit. Without interior prescription, it becomes possible for one large developer to take responsibility for several blocks, amounting to a multi-block parcelisation strategy. However, to enhance place diversity and reduce the impact of any developer failure, they may be a limit on the number of contiguous blocks, or the proportion of any one phase, that can be controlled by any single developer.

## **SMART PARCELISATION AS A PATHWAY TO PLACE DIVERSITY**

Love and Crawford (2011, 102) argue that masterplans should be built up from parcel maps and not vice-versa “with a specific idea about the possible building types embedded in their very logic, ranging from highly dense low-scale buildings that can thrive on small parcels, to more innovative types to fill out the mega-block, as it will inevitably persist in some contexts”. Crucially, they suggest that appropriate parcelisation can produce ‘greater bandwidth’ that “seeks to balance the advantages of large and flexible parcels with modest parcels that will attract capital investment at a smaller scale and create a city with more physical diversity” (Ibid, 102).

Smart parcelisation links land subdivision to a design code or set of rules specifying three-dimensional form. Such codes typically expand on the design vision contained in the masterplan and are often prepared alongside it. Carmona (2009) argues that design codes are particularly helpful for large sites in multiple ownership or those likely to be built out by different developers with different design teams over a long period of time. In these circumstances, site-specific design codes, unlike generic development standards such as highway requirements or building regulations, can significantly improve individual design and overall place quality, while speeding up regulatory consents and providing certainty to developers and the local community.

Design codes provide an explicit means to ensure that each plot or sub-division contributes to the intended place vision. Although it may seem easier to parcel up land before coding, we argue that successful parcelisation depends on both knowing and taking account of the key principles contained in the design code. Ideally, therefore, coding and parcelling should go hand in hand. As a general rule, development parcels that are similar in configuration and intended form greatly ease the coding task. Conversely, more complex, intricate layouts involving, for example, corners and public spaces, require more complex and intricate parcelling schemes.

To summarise, smart parcelisation involves the sub-division of a large development area into different sized parcels to encourage a variety of developers and designers, with explicit linkage to coding requirements within sale or lease contracts to ensure a more focused emphasis on place diversity. It is not impossible to achieve this through a development consortium, in which the various parcel developers come together as equals to achieve mutually beneficial aims. However, there is a much greater chance of deploying smart parcelisation to deliver place diversity when the master developer acts as the place promoter, setting the context for individual parcel developers to maximise the potential of their own developments. In particular, the contractual relationship between the master and parcel developers ensures mutual commitment to matters that make a crucial contribution to place quality, such as phasing and coding, since they are embedded in property rights transactions.

## **SMART PARCELISATION IN ACTION**

We now turn to illustrate the concept of smart parcelisation through a case study of Newhall, a recent major extension to Harlow New Town in Essex, UK. This research is based upon qualitative analysis of documentary evidence, direct observations and on semi-structured interviews carried out in 2009 with the landowners' marketing executive and the local planning authority. The study formed part of a wider research project commissioned by the Scottish Government on the challenges of place delivery (Adams et al. 2011). It demonstrates how smart parcelisation can help avoid design standardisation, with housebuilders encouraged to deliver much better quality products and greater place diversity than the industry norm.

Newhall's development was driven forward by its longstanding landowners, Jon and William Moen, who involved a range of designers and developers in creating what is now widely regarded as an exemplar housing development with long-term investment value. This will ultimately create around 3,100 new homes on greenfield land, of which approximately 20% will be 'affordable'. The development will include a neighbourhood centre, primary school, commercial space and leisure facilities. To ensure the creation of a high quality urban neighbourhood, rather than a standard suburban housing estate, the landowners commissioned the highly-regarded architect and urban designer, Roger Evans, to produce a masterplan and design code. The masterplan emphasised the importance of streetscape, focal points, varied character areas, a mixture of housing tenures and proposed higher densities along the main streets and centre, but somewhat lower elsewhere in the masterplan. It also placed importance on integrating social housing evenly across the entire masterplan and conserving natural assets. Accordingly, 40% of Newhall will eventually be set aside for a combination of habitat creation and leisure use.

As master developer, the Moens (operating as Newhall Projects Ltd) subdivided the first phase of just over 600 dwellings into six roughly equal development parcels (see Figure 4 to 6 and Table 1). These parcels were marketed on the basis that the winning parcel developers would meet the requirements of the masterplan and design code, as embedded into the conditions of land sale. The parcels were carefully configured and phased so that successive parcel developers built the primary infrastructure, including the main road through the development.

**Table 1: Development Parcels at Newhall Phase One**

Parcel		Developer	Total No of Dwellings	Affordable Dwellings (for Moat Housing Association)	Type	Density	Architects
1	Maybole Green	Barratts	94	0	1-5 bedroom houses and apartments	31 dph	Robert Hutson with design concept input from studio   REAL
2	Abode	Cophorn (now part of Countryside)	113	5 all rented	Apartments, duplex, town houses, terraced, mews & detached	52 dph	Proctor & Matthews
3	Cala Domus	Joint venture between CALA Homes (South) and Newhall Projects	113	0	Apartments, duplex, town houses, terraced, mews, detached & courtyard	39 dph	PCKO
4	North Chase	Newhall Projects	28	0	1-2 bedroom apartments, 3-5 bedroom houses	46 dph	Richard Murphy
		Newhall Projects	68	0	Apartments above commercial unit		ECD
		Newhall Projects	15	0	Apartments above shops & café/restaurant		ORMS
		Newhall Projects	17	17 (3 rented and 14 shared ownership)	Disability units, apartments & town houses		studio   REAL
5	Slo	South Chase Newhall (joint venture between two developers)	78	48 (7 rented and 41 shared ownership)	Apartments, terraced and courtyard houses	52 dph	Proctor & Matthews
6	Be	Linden Galliford Try	85	22 (14 rented and 8 rent to home buy)	1 bedroom apartments to 4 bedroom villas	52 dph	Alison Brooks

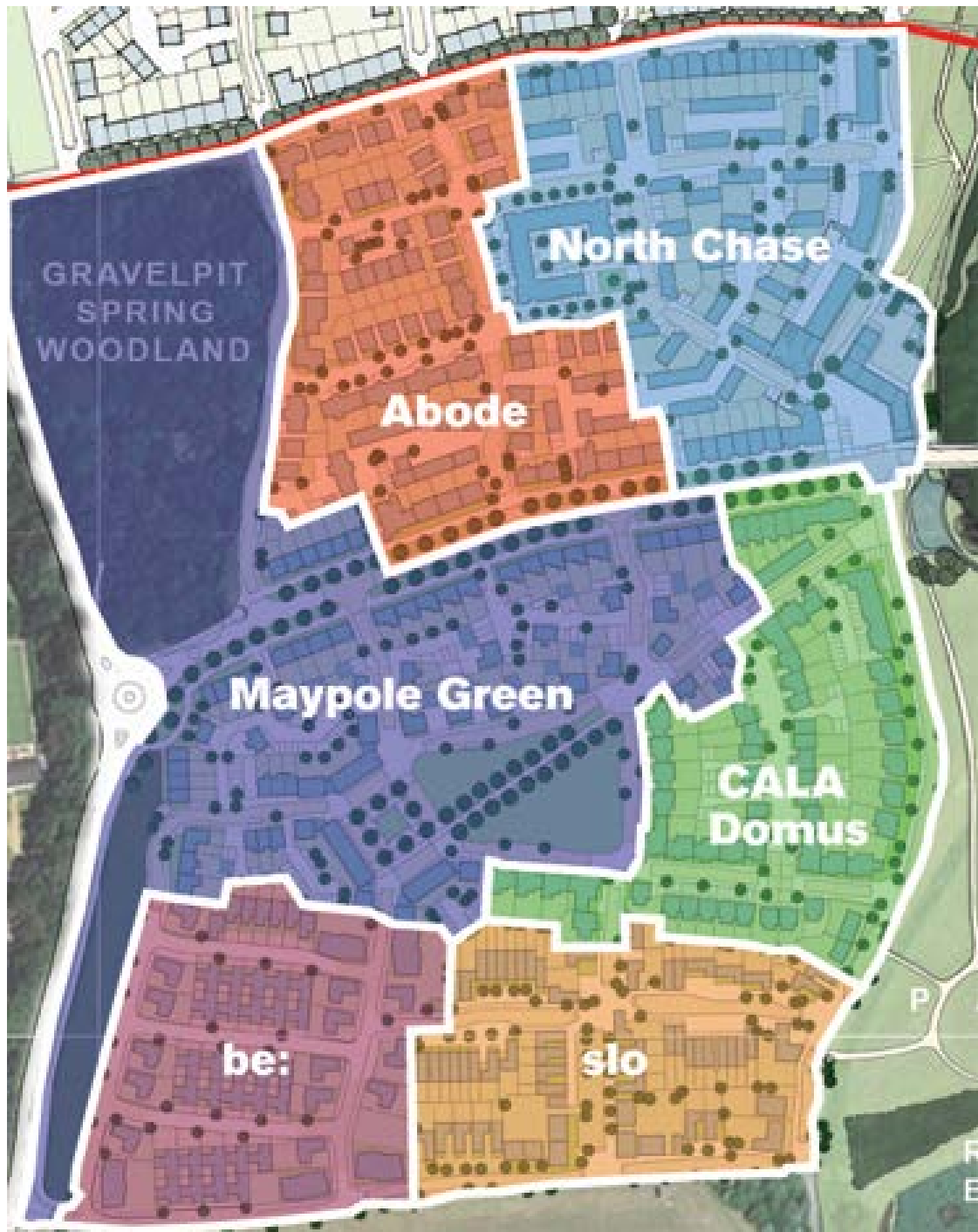


Figure 4: Parcel Map, Newhall

The masterplan formed the basis of successful negotiation with the local planning and highway authorities and helped create confidence and certainty amongst parcel developers about the intended future of Newhall. Development parcels were kept relatively small to facilitate greater architectural diversity and were designed to ensure the 'seams' joining parcels ran along rear boundaries, except for the most important public spaces where the joins were in the middle or edge of the public realm. The parcels were also released from the core to minimise construction disturbance from subsequent developments. Each featured a different developer and different architects, with more than one architect employed on some of the parcels. The first phase of Newhall, which commenced in 2002, was virtually complete by 2011, and planning for the second phase was by then well advanced

The distinctive form and appearance of Newhall is directly attributable to the specific relations that the landowners established with successive architects and developers to ensure that development took place on the terms they desired as place promoters. Procurement methods gradually evolved through a four-stage learning process, giving the landowners greater control over the commissioning of designers and the design proposals (Evans 2003; 2008). As a result, developers who wished to participate in Newhall had to employ skilled architects to negotiate the enhanced regulation successfully, instead of simply replicating 'standard' designs. The procurement process thus produced a change of developer mindset.

The first parcel (Maybole Green) was offered through a traditional design/tender competition. From 40 initial expressions of interest, six possible developers were invited to tender and left to choose their own architect. Sample designs were rated before financial tenders were opened. These were considered disappointing with most competitors intending to reproduce standard house styles that were 'more vernacular' than the Moens desired. As this suggests, housebuilders initially saw the project as more risky than one with fewer design constraints. To contain perceived risk, the selected developer was reluctantly permitted to use a more standard product on half the parcel.

For the second parcel (Abode), a design/tender competition was again held but in this case using architects pre-approved by the master developer. The winning entry proposed a mixed-use scheme including apartments, town houses, detached houses and live-work units. For the third parcel (Cala Domus), the master developer organised an architectural competition to produce a concept design, which was then used to select the parcel developer. To guarantee implementation, the Moens entered into a joint venture with the winning developers. The principle of commissioning a conceptual design prior to developer selection was followed in the remaining stages. The fourth parcel (North Chase) was developed directly by Newhall Projects but to achieve even greater place diversity, it was split up into four sub-parcels, each of which became the responsibility of a different architect.





Figure 5: Parcel B, Newhall: Abode



Figure 6: Parcel C, Newhall: Cala Domus

Newhall demonstrates how the combined power of a masterplan, design controls and land subdivision can challenge monotonous suburban standardisation to achieve what Talen (2006) has called 'place diversity'. Although uneven in some parcels, smart parcelisation has generally led to a rich and innovative architectural treatment, a legible and permeable street layout and a thoughtful mixture of house types. Moreover, non-residential land uses, including a



café/restaurant, shops and a community centre, are beginning to complement and sustain the emerging residential parcels.

According to Talen (2006), place diversity is more likely when neighbourhoods contain varied housing tenures and facilitate social and economic exchange. So far, about 15% of Newhall's housing has been built to be 'affordable'. Crucially, housing for rent or shared ownership is not confined to one corner of the development, but is sprinkled across the later parcels, with its design largely indistinguishable from that of one market housing. Newhall's greater diversity in house size and type compared to standard suburban developments, also means that people can remain within the scheme as their needs and demands evolve, rather than have to move elsewhere. Diversity in the physical fabric thus fosters greater social diversity.

## **SMART PARCELISATION AND THE POWER RELATIONS OF DESIGN AND DEVELOPMENT**

Newhall is quite unusual both as both a place and a process of production. It harks back to an earlier age when the five great landed estates of Bedford, Cadogan, Howard de Walden, Grosvenor and Portman fashioned the development of a large part of Central London (New London Architecture 2006). Driven by their interest in long-term investment value, the great London estates created what are now among the most prized listed buildings and conservation areas in the UK. Similarly, the Moens were determined to achieve high quality architecture and place-making, both for its own sake, and to produce higher returns. They too had owned land for many years prior to development – in the Moens' case, it had been the family farm since the 1920s. This meant that the Moen family stood to benefit significantly from the substantial uplift in land value which development would inevitably bring.

Significantly, the potential of that uplift made it worthwhile to commission high quality design expertise in the pursuit of planning approval. Although build costs for Phase 1 were 10-15% above standard suburban development nearby, selling prices were 15-20% higher (Architectural Review 2013), generating immediate added value. This was maintained in the midst of the economic downturn, simply by slowing down output, with the result that Phase 1 has taken longer to complete than originally intended, while the much larger Phase 2, although already well planned, has yet to start. Newhall is thus a good example of 'patient equity' (Leinberger 2007), where an investor is prepared to wait for some years to reap the benefit of better design and quality place-making.

What does the Newhall example tell us about the power relations of residential development and design? By the twentieth century, the 'petty builders' whose dependent relationship on landed estates was central to the creation of Georgian and Victorian London (Clarke 1992) has long since given way to a highly concentrated speculative housebuilding industry, heavily dependent on the City of London for debt and equity finance (Calcutt 2007). By rationing the supply of land and introducing ever more complexity into its allocation, the planning system has advantaged those volume housebuilders who have the resources both to purchase land counter-cyclically and to invest in the best professional advice necessary to secure its release for development (Adams and Tiesdell 2013). Once mass production was combined with a booming housing market (exacerbated, in part, by land shortages), design was relegated to the fringes of corporate decision-making, with Barker (2004, 107) noting that "Once land is secured, competitive pressures are reduced: to a large extent housebuilders can 'sell anything'." This structural context has made housebuilders adept at persuading those owning land with development potential that early sale and exit represents the most risk-free strategy.

Instead of buying out the landowners, housebuilders at Newhall been forced to respond to the Moens' design-led agenda. What has produced this change in the power relations of design and development? First, the Moens have been willing to assume greater development risk than most landowners, in order to achieve greater development return. Secondly, the importance they attached from the start to a high quality masterplan and design code enabled them to negotiate successfully with the local planning authority, and then to draw on the much-enhanced land value that derives from planning consent, so avoiding over-dependence on borrowed cash (Architectural Review 2013). Thirdly, housing land shortages in the south east of England, which became ever more prominent as successive Newhall parcels were released, meant that once the development began to establish itself, housebuilders were unlikely to be deterred by high quality design requirements embedded in sale conditions.

Although Newhall remains very much the exception rather than the rule, can this shift in power relations be replicated elsewhere to change the balance of power in speculating housebuilding? There is evidence from Upton in Northamptonshire, where English Partnerships (now the Homes and Communities Agency) played a similar role to the Moens that where the public sector owns development land, it is in a much stronger position to achieve design quality than if acting merely as planning authority. Such examples are not confined to the south-east of England, for Moray Estates' proposed new settlement of Tornagrain, close to Inverness, also prioritises high quality design and place-making. Ultimately smart parcelisation may well be able to change the power relations of design and development, but perhaps only where the confidence, determination and resources of the landowner are matched by favourable enough economic conditions to contain its higher risks compared to simply selling land to a builder and making an early exit.

## CONCLUSIONS

A key challenge for urban designers is to understand the processes by which diverse places can be delivered. The mere articulation of place diversity within a masterplan is not enough to secure its effective delivery since the way in which any masterplan is implemented is just as important. In this context, we have shown the benefit to place diversity of a clear separation between master developer and parcel developer, with each role played by a different actor. Drawing on international examples as well as from the private-led development at Newhall helps reveal how this can work in practice. Such examples illustrate how place promoters can exploit the power of land ownership in the pursuit of long-term investment value, provided they are willing to postpone short-term development returns and assume greater development risk. While many may see place diversity as the spontaneous product of rich interaction between the varied forces that shape the urban environment, we suggest that smart parcelisation offers the deliberate chance to enhance social as well as physical diversity in those new developments that would otherwise tend to uniformity.

Such experience is especially relevant to the UK, where much of the urban landscape is characterised by mass-produced housing estates, in which standard dwelling types are incessantly reproduced by volume builders. Despite significant policy efforts between 1997 and 2010 to persuade the housebuilding industry of the merits of better urban design, recent evidence points to a return to basic repetitive development as the industry slowly emerges from the recession. As Calcutt (2007) has shown, the dependence of most volume housebuilders on the City of London for debt and equity finance creates a short-term trading mentality in which quality design is often sacrificed. Smart parcelisation has the potential to recast such power relations by enabling landowners to take strategic control of the overall development process. At Newhall, parcelisation made it easier to create a place of real quality that will still produce better long-term

financial returns for its promoters. This experience points to what might be achieved if policies were to be put in place to encourage separation between the roles of master and parcel developer.

Although Newhall charts a clear direction away from traditional residential development, it should not be taken as the ideal for there is much still to be learnt about reforming procurement processes to achieve place diversity. For example, Newhall has not managed to achieve the intense variety of plot-based development seen at IJburg, and elsewhere in Europe. Its completed phases are primarily residential developments, with the limited commercial elements located in specifically-designated quarters, rather than spread throughout the scheme. Post-occupancy research is still needed to discover the true extent of Newhall's social diversity and assess whether the development has attained the fully comprehensive form of place diversity imagined by Talen (2006) and others. Yet, evidence so far suggests that the Newhall masterplan has created the basic foundations for a sustainable and socially diverse community to emerge over time.

By drawing development and design together, Newhall's story also reveals the vital role that many stakeholders who would not see themselves as urban designers play in masterplanning and delivery. It thus emphasises how the achievement of smart parcelisation requires clear linkage between design and procurement. This ties urban design theory into broader aspects of social science, including economics and finance, governance and policy, and property rights theory. Setting urban design within this broader agenda would indeed assist research into the effective delivery of place quality under different institutional conditions.

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