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Coordinating density; working through conviction, suspicion and pragmatism

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Achieving higher density development has become, as part of sustainable development, a core principle of the contemporary planning professional. The appeal of density is its simplicity, it is an independent measurable element to which various separate claims can be and are attached; it achieves greater public transport use, makes it possible to live nearer to work, supports mixed uses providing a more lively street-scene and so on. As the academic literature has shown the reality is much more complex as achieving a positive outcome through adjustments to density may lead to negative outcomes elsewhere; it can allow more people to live near public transport nodes but can be detrimental in terms of housing affordability for example. Given this tension between the simplicity of the claims and the complexity of application we are interested in how planners seek to balance the multiple advantages and disadvantages of density; to what extent do they approach density as a simple variable or as a complex act of balancing. We address this question by looking at four higher density developments in London.

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1. Introduction

Higher density development occupies a fascinating and enduring place in planning literature and planning practice. Our work was motivated by a simple question. In the context of multiple win-win claims for density to what extent do planners seek to balance the benefits and dis-benefits of higher density development in practice? One appeal of density is its apparent simplicity, it is offered as an independent variable (Boyko & Cooper 2011), which will deliver a series of benefits. In England, lower density development has been the tradition and so higher density living required a cultural shift on the part of developers (Karadimitriou 2013) and potential residents (Allen & Blandy 2004). Given this, the New Labour government of 1997-2010 drew heavily on what we categorise as a discourse of conviction to support this shift. Taken from the point of view of many practitioners, politicians and pressure groups, density serves as one of the most powerful tools to make cities more sustainable. Density is a simple yet effective measure that brings together economic, environmental and social benefits solving the problems of a sprawling society that has become disconnected, disengaged and distant from an earlier ideal of urban propinquity. But this simple win-win characterisation hides great complexity. There are competing claims relating to density which we define here as discourses of suspicion and pragmatism. From the perspective of more pro-market urban economists, the push for density symbolises all that is wrong with land-use planning and its anti-market ideals. This body of criticism we identify as a discourse of suspicion, which sees density in a far more critical light and renders it problematic through a more fundamental questioning of the right or wisdom of state intervention in the market and of land-use planning in particular. From this perspective, density is simply one more example of a misguided attempt to intervene in the market. In contrast to the binary positions of discourses of conviction and suspicion, there is a large body of scholarly work that sees density as a policy objective in need of careful empirical evaluation. This debate attempts to understand what we may be likely to achieve is a policy of higher density is to be followed. It is less concerned with principled claims for or against higher density and is, instead, more focused on the practicality of implementation. Our paper asks how planners relate to these three perspectives. We evaluate the discourses of conviction, suspicion and pragmatism against the everyday practice of local planners when they make policy and determine applications. To elaborate on our initial question, we ask about the extent to which local planners assume that win-win outcomes will flow from higher density, as implicit in policy passed down through a hierarchical planning system. And about the extent to which local planners engage with discourses of pragmatism or even of suspicion.

Our paper proceeds, in section two, with a literature review that fully outlines three discourses on planning for density. Next, in section three, we examine how national policy has addressed density

in the UK and in particular England, thus providing ourselves with a temporal and institutional context in which to interpret the actions of contemporary local planners. The UK, England in particular, has a history of suburbanisation built at relatively low density, although, still at higher density than in other nations following this model such as the US, Canada and Australia. Planning's modern day roots are largely to be found in solutions to nineteenth century industrialised cities such as London and Manchester. Early solutions included the Garden City which was not anti-urban in its philosophy but, as realised, proved to be the template for mass suburbanisation in the twentieth century. As such, UK planners are inheritors of a low-density tradition, which has only recently been challenged. Much of this challenge has come from outside the profession, notably through the millennial Urban Task Force (1999), subsequent legislation and central government planning policy guidance. While local planners may now be advocates of higher density development they are not its primary instigators as central, and in some cases regional, policy has set the agenda.

Having set the context, in section four we next introduce our London case study, which looks at higher density development in two outer and two inner London authorities. After losing population over much of the twentieth century London has seen a marked reversal in its fortunes, inner London in particular has seen strong employment growth and a steady and sustained increase in its population, in no small part attributable to in-migration. There is a chronic problem of housing undersupply in England and this is particularly problematic in the economically 'hot' London and the southeast where a shortage of units and lack of affordability are both a growing cause for concern. Given long-term policies of urban containment in England, notably greenbelt policies, there is pressure in London to deliver a large number of units on a constrained number of sites; in the absence of a substantial increase in land supply the need to increase density is therefore evident. However, the turn to density is not sold as simple necessity, by those engaged in the discourse of conviction. Rather, it is held up as a highly desirable choice, bringing a series of social, environmental and economic benefits even where land supply is not so restricted.

In the fifth section, using our three broad approaches to density, we turn to look at how planners approach and attempt to deliver the claimed benefits of higher density development. Do they simply assume that a series of gains will inevitably flow from density (the conviction approach)? Do they seek to develop techniques to balance the wins and losses of density (the pragmatic approach)? And to what extent do they question the fundamental claim that density and, by default, planning practice can deliver substantial gains in terms of sustainability (the suspicion approach)? In the sixth section we turn to the outcomes, looking first at how local planners evaluate developments against the claims for density.

Finally, in concluding, we seek to draw some lessons for the future delivery of higher density development. Local planners operate within a highly constrained setting that threatens to make them mere transmitters rather than generators of discourses of density. However, local planners are reflexive and realistic in relation to density, they are not simple recipients of discourses of conviction. Planners increasingly have experience of higher density development and are reflecting on this. Yet, it is not evident how this knowledge is brought together horizontally between local planners (and others involved in local governance), or fed vertically to higher tier policy makers. We suggest a need to capture and direct experience at the local level more effectively.

2. Background

In this section we review the literature on density. As more extensive reviews exist elsewhere (Boyko & Cooper 2011), our purpose, here, is to categorise the literature within three broad positions on density that we have identified, conviction, suspicion and pragmatism. The purpose of this is to set out more clearly the interplay of influences in the debate and how this brings great complexity to the task of planning for higher density at the local level. There are many reasons why density has come to the fore and these also come to bear on local planning. Super density, stereotypically associated with the Asian city, is rapidly becoming a marker of modernity against the quaint and old bucolic visions of low-density suburbs. An increasing concern for the environment, a burgeoning world population and the emergence of the economic benefits of agglomeration all provide impetus for the case in favour of higher density.

First a brief word on terminology and approach. We use the term compact city in this article, as it is in common usage in much of the literature to which we refer. In the UK, many of the ideas of the compact city have been promoted through urban renaissance. Because the compact city is a broadly defined set of ideals rather than a single outcome, and because the term is not used in everyday practice in the UK we have chosen in the title and in reporting our research to refer to higher density development. We are not seeking to reduce the compact city only to density, although it is an important part of it. Rather, we focus on the role of density in potentially delivering the broader suite of aims of the compact city. In the rest of this section, where we set out the literature review employing our three-way classification, we do not lend support to one position over another; rather, at this stage we are simply setting out to categorise the positions taken on density.

2.1 Discourses of conviction

'Urbanologists', can be seen to put forth discourses of conviction concerning the compact city with an almost "evangelical fervour" (Gleeson 2013: p1841). These discourses of conviction accompany the economic changes that have occurred over recent decades, which have led to a focus on the

tendency to agglomeration and the economic value that this generates (Sassen 2001; Scott 2001). After an initial period of deindustrialisation in Anglo-American cities where a cycle of job and population losses made some question the future of cities, many have proven to be remarkably durable in a world of transient flows (Castells 2010). For Gleeson (2012), urbanologists can be identified by their "enthusiasm for physical density as a determining force (for good) in human relations" (p937). Examples of this are found in Glaeser (2011), "cities are expanding enormously because urban density provides the clearest path from poverty to prosperity" (p1), and Brugmann (2009), "without density of settlement, most of what we learn, produce, construct, organize, consume and provide as a service in the world would simply be too expensive" (p27). It is clear that these authors are axiomatically adopting a position that places density and good urban design at the heart of improving urban economic fortunes.

International institutions have also joined the 'new urban conversation' and bought into the compact city project by promoting denser cities with more public transport as solutions to climate change (Gleeson 2013: p1841). UNEP's Green Economy Report features a chapter named Cities, and one of its key messages announces that, "compact, relatively densely populated cities, with mixed-use urban form, are more resource-efficient than any other settlement pattern with similar levels of economic output" (UNEP 2011: p458). Both the World Bank and the OECD have also recently released reports on Cities and Climate Change, both with very similar messages. Compact cities are a determining factor in producing more sustainable cities because they make more efficient use of public infrastructure, lead to less energy demand for transport and give better access to services (OECD 2010; World Bank 2010: p28). All three of these reports were released over a very short period suggesting the possibility of xx. The issue of cities and climate change has also been taken up by UN-Habitat in its global report, albeit with more care in its discussion of the evidence base (UN-Habitat 2011).

This normative voice surrounding density reflects both a long-term and shorter-term conventional wisdom about the city. Here, Jane Jacobs is the key figure writing in defence of a dense and mixed urban form, two key components of the compact city project (Jacobs 1961). This defence of vibrant inner-city blocks against the impetus to sprawl was rediscovered in the context of the process of legitimisation of the compact city. The characteristics she described have been reiterated decades later as a means to produce sustainable cities and improve quality of life (Rudlin and Falk 1999; Urban Task Force 1999). This urban design led discourse on the compact city is one of conviction in the sense that it relies on principles rather than empirically tested facts. As proposed by Jacobs and Appleyard, "After a while one knows and accepts that the research into what makes good places to live will be endless, often without conclusion, and always value-laden. There comes a time when one

says, 'Well, I must take a leap. All of the experience has taught me something. It may be unprovable, but I think I know what a good place is'" (1987: p112). A similar argument, but with a different rationale, is made by Ellis (2002) who argues that as developers can build at lower density without evidence of its desirability urbanists should not wait for evidence to make the counter case (p283). Both these arguments question the absolute necessity of an evidence base in deciding on which type of urban forms should be sought. Through a tautological process, density takes on an institutional character for urbanists, it becomes a quality of professional belonging; to become an urbanist one has to appreciate the experience historic dense urban forms - Sienna, Manhattan, Paris - and, in having come to appreciate them, one is intuitively aware that dense urban form is good. This conventional wisdom is reinforced through institutional transmission.

The promotion of the compact city as the sustainable urban form, and idealised through reference to the medieval walled city, has to be read as a not-so-veiled reaction to the dominant suburban character of the US and UK (Swenarton 2002). The new urbanism debate in the US and urban renaissance in the UK (which broadly converges with the compact city debate but does not use the term), are both informed by a longstanding professional critique of suburbanisation in these two nations. Many of the most vocal early critics of mass suburbanisation were architects (Nairn 1955) but some planners were too (Mumford 1968). This longstanding criticism is reflected in a contemporary variant of this discourse rooted in the urban design world. The principles of good urban design that Allan Jacobs and Appleyard (1987), and Ellis (2002), advocate are very similar to those of Jane Jacobs: minimum density levels, integration of activities, pedestrian public spaces and complexity of building types. However, Ellis is particularly overt in indicating how these 'good' principles are derived in no small part in reaction to 'bad' suburbanisation.

One appeal of the compact city is its simplicity, that it can apparently provide solutions to a range of problems. The compact city, like community or sustainability, has a motherhood and apple pie quality to it; it is an unquestionable good. But discourses of conviction are highly selective in their idealisation of the compact city and are often marked by a distinctly a-political character. Low density London is compared unfavourably with high density Paris (Weaver 2003), yet while the petit bourgeois suburbs of London are viewed as a failure of English urbanism the suburbs of Paris, the banlieue, with all their social injustice are – along with France's extensive urban sprawl -simply not mentioned. The selective nature of the discourse of conviction sometimes fails, or chooses to ignore the complexities and challenges of density. However, oppositional voices and voices of caution are found in discourses of suspicion and pragmatism.

2.2 Discourses of suspicion

Some discourses of suspicion are driven by dogma in the same way as discourses of conviction. The latter can overplay the role of the built form by claiming unproven or doubtful causative links between the built form and social benefits (such as sociability or equality) or behaviour (including delivering on more environmentally sustainable lifestyles). Meanwhile, some in the suspicion camp underplay the politics of the built form as the exercise of market choice can be more apparent than real. The suburbs, for example, where not simply the result of market choices by consumers, the conditions for their existence were often facilitated and/or underwritten by the state (Beauregard 2006). As well as the ideological drivers of 'free choice' described by Beauregard, consumers are unlikely to request housing products that they can't imagine. This has a self-reinforcing aspect to it, as when developers ask what sort of housing consumers want, consumers are likely only to make a choice from known products – reinforcing a certain conservatism on the part of developers (Karadimitriou 2013). Therefore, while discourses of conviction can overstate the benefits of density by focusing on gains while underestimating the costs of density, discourses of suspicion can sometimes overplay 'choice' where there is likely to be imperfect knowledge on the part of the consumer. This over claiming for 'choice' is reflected in the two broad strands of discourses of suspicion. One is rooted in principled objections to state intervention that seeks to guide people's housing choices away from suburban developments toward more dense urban forms. The second highlights the unintended but often socially regressive consequences of restricting land supply and enforcing higher density cities. A staunch 'principle' opponent of policy led density and of planning more generally is O'Toole (2000) who frames his critique in terms of arguments for small government:

> When smart-growth planners say they want to give people choices, they mean they want to take choices away. When they say they want to relieve congestion, they mean they want to increase congestion so that people will be forced to ride mass transit. When they say they want affordable housing, they mean they want to make single family housing unaffordable so that all but the wealthiest people will live in high density housing. When they say they want to preserve open space for people, they mean they want to preserve it from people. (O'Toole 2001: p8)

O'Toole's attack on smart growth[1] is centred on the right of individuals to make their own choices in the face of planning regulations (O'Toole 2001). As such it is not so much a criticism of the compact city project per se but rather a defence of the right to sprawl. For pro-market critics, the planned compact city contravenes individual desires, which people should be free to act on in a market

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[1] In simple terms a US variant of the compact city.

driven society. Suburbanisation is simply a reflection of rising wealth, people will buy internal space and other benefits linked to housing such as garden space when they can afford to. These are going to be more affordable in the suburbs and as market actors, people should be able to choose to accept the time and financial costs of commuting, offsetting these against the benefit of lower density suburbia (Bruegmann 2005; Cheshire 2013; Howley 2009). In their study of 108 households moving houses in Cardiff, Senior et al. (2004) found that, "majority residential preferences are substantially out of alignment with the policies promoted by those preaching the virtues of an urban renaissance. Most households do not wish to live at higher densities, with less garden and parking space per dwelling, on brownfield land in inner-urban and city centre locations" (p354).

This argument of choice and consumer demand links well with the ideas put forward by Audirac, Shermyen and Smith (1990) regarding the extent to which planning is able to stand in the way of strong market forces in any but the most restrictive of societies. They highlight that compact city policies ignore residents' willingness to adopt and to pay for these measures and warn that the fact that these policies are advocated as 'taxless' solutions for urban sustainability may undermine support for stricter environmental policies. Similarly, Gordon and Richardson (1997) are also strong opponents of planning measures inspired by the compact city project on the similar grounds that they are in opposition to a preference for low-density development. Their engagement with the compact city project has led them to conclude that it is fundamentally flawed: "attempting a reversal of existing urban development trends is neither feasible nor desirable" (p103). For Neuman (2005) the compact city project can be criticised for obscuring those relations that are most important to achieving urban sustainability: "The attempt to attain sustainability via physical means alone is nonsensical" (p23). Similarly, Goodchild (1994: p153) argues that we cannot determine behaviour through planning alone. We cannot assume that the compact city will save energy on transport because we can't predict human behaviour that well. This is also the essence of Gleeson's (2012b) challenge to the compact city project: "It is not the work of planning to reshape the deep political economic structures driving human society to the precipice of climate default. A different rationale beckons that leads back to the origins of planning purpose. Adaptation is surely the new watchword for planning" (Gleeson 2012b: p253). For Gleeson, the compact city project falls prey to ecological fallacy, environmental determinism and spatial fetishism (Gleeson 2012b: p249) and planning should focus on the resilient city agenda.

A variant of this argument is that the market is a better mechanism for changing behaviour. For Cheshire (2013) the more honest and effective answer would be to capture the full cost of using fossil fuels through taxation, moderating behaviour through price signals, rather than seeking to influence behaviour through the built environment. He argues that using the built environment to

moderate behaviour is problematic, first because it takes a long time to achieve and, second, because we simply do not understand the city or human behaviour sufficiently to predict which particular built form will lead to a desired behaviour. In this context, Cheshire (2006) warns of the dangers of advocating policies, such as containment and densification, without the clear evidence base needed: "we are arguing that there is no adequate evidence for believing that they are right or will improve cities, either as places in which to live or as centres of economic activity" (p1243); in essence, this is the counter-case to Jacobs and Appleyard's (2007) appeal to experience in deciding better urban forms. Clark (2005) also sees issues with the assumptions regarding individual behaviour made by proponents of the compact city, highlighting that the circumvention of compact city inspired regulations by the wealthy could lead to even more detrimental outcomes. Finally, from an Australian perspective, Forster (2006) argues that, "metropolitan planning strategies suggest an inflexible, over-neat vision for the future that, however well-intended, sits dangerously at odds with the picture of increasing geographical complexity that emerges clearly from recent research on the changing internal structure of Australian cities since the early 1990s" (Forster 2006: p180).

Finally, some authors point out that the political instrumentalisation of the compact city project is a very real possibility. This is the suspicion that the notion of the compact city can be used as a cover to push forward policies and interventions that have goals other than environmental and social sustainability. Searle and Filion (2011), for example, raise the issue of the political use of the compact city project. Through their case studies of Toronto and Sydney they highlighted how the compact city was justified with differing emphases as the situation changed: "in periods of housing value inflation, intensification is presented as an instrument of residential affordability. When public-sector budgets are especially tight, it becomes a means of reducing expenditures on infrastructure. Lately, emphasis has centred on the environmental, health and other quality of life benefits associated with the reduced reliance on the automobile afforded by intensification" (Searle and Filion 2011: p1429). This is reflected in the attitudes of political parties in power towards intensification: in New South Wales, "the more conservative Liberal Party emphasised public expenditure savings associated with intensification, whereas the Labour Party also underscored its environmental benefits" (Searle and Filion 2011: p1430). The fact the compact city project can fit these very different political agendas raises the possibility that it could be used instrumentally – as just another justification for a desired course of action - with potential distributional consequences.

This same instrumentalisation of the compact city project can be seen in the critical analysis of the attempts to intensify the Poblenou district of Barcelona by Charnock and Ribera-Fumaz (2011). For them, the increases in density and emphases on mixed-use are meant to, "intensify the competitiveness of the district; first, as a place of economic innovation and transformation and,

second, as a place of a vibrant popular culture based on the civic cultural tradition of Poblenou, and further strengthened by the bohemian milieu of various artists' studios, small creative companies, and communities resident in the district since the 1980s" (p625). As such, they see the compact city project as merely the latest label under which to further the quest for urban competiveness – a consideration far from the original aims of the compact city (Charnock and Ribera-Fumaz 2011). Sorensen et al. (2010) give us another example of the political instrumentalisation of the compact city project. In an economically stagnant Tokyo, there were, "powerful incentives for the central government to promote renewed profitability in the land development sector, a major method of which has been regulatory changes designed to promote intensification in central Tokyo, that have been promoted as 'compact city', 'urban revitalisation' and 'urban renaissance' strategies" (p560). This has been done through the transfer of planning powers from local to the central state, which, "served to undermine local democratic input into urban governance, to shift the balance of power in favour of asset accumulation and against liveability, and to increase conflict over urban intensification" (Sorensen et al. 2010: p580). Here, the compact city project is used as a means to legitimise the transfer of powers over planning from one scale to another and to justify the precedence accorded to exchange values over use values. Lees (2008) also warns us about the latent state-led gentrification agenda contained in UK policies that broadly draw on the compact city project: "it is ironic that a process that results in segregation and polarisation—gentrification—is being promoted via social mix policies as the 'positive' solution to segregation" (p2463).

In summary, for those engaging in a discourse of suspicion, the attempt to plan cities is problematic for three, related, reasons. First, these authors raise principled objections to state intervention in market choices. For, Troy (1996), the issue with the compact city project, in this case the Australian variant of urban consolidation, is that it attacks the egalitarianism he sees as an inherent characteristic of suburban development. Urban consolidation, he argues, justified by discourses of sustainability and global competition, has led to an undermining of the social equity agenda and thus had a disproportionate effect on those most vulnerable (Troy 1996). A second related point is the danger of state failure. There will be indirect unintended outcomes where the policy focus is on the environment, there may be detrimental social and economic effects that are not properly costed. The compact city project has no regard for the larger dynamics at work in the city, reducing cities to mere sites (Vallance and Perkins 2010). Third, is the various ways in which the state and market deploy the case for the compact city, which suggests that it is being used to meet varied agendas which are given justification by claims to sustainability. Among these are attempts to align the notion of the compact city with party ideologies, its deployment to support urban competitiveness and the way it is used to provide a more profitable environment for developers.

2.3 Discourses of pragmatism

In contrast to the discourses of conviction and suspicion presented above, the majority of scholarly work on the compact city is embedded in a discourse of empirical evaluation. Here, the compact city is consciously taken as a policy objective that is open to empirical evaluation, with research aiming to allow for empirically supported conviction or suspicion. Like discourses of suspicion, discourses of pragmatism can similarly question the extent to which density will be able to achieve the claims made for it, however, pragmatists are more likely to seek to suggest means towards the ends rather than questioning the ends in the same way as discourses of suspicion.

For some pragmatists the compact city project may be theoretically justifiable, but they find common ground with the discourse of suspicion in believing this does not mean that it can necessarily deliver these benefits: "the desire for the big idea has returned. However, the world is now more complex and political than it was when Howard, Wright and Le Corbusier were in full flow. Even if sustainability gives us a motive for the big idea, that idea necessarily has to be tempered by a dose of realism" (Breheny 1996: p32). Breheny advocates a middle ground between what he calls the extreme centrist (smart growth) and extreme decentrist positions (free marketeers and those who advocate a return to rural values); in doing so, he is questioning the ability to deliver the claims for the compact city project as presented by those he labels the extreme centrists (Breheny 1996).

Most research within this category follows a similar format, which can be best grasped by focusing only on the 'density' aspect of the compact city. Churchman (1999) and Boyko and Cooper (2011) offer two broad reviews of the literature (the latter of 75 different studies) focused on the attempts to arrive at some conclusion about the effects of increasing densities in cities. And this focus on empirically evaluating the compact city is far from over. Dempsey and Jenks (2010) make the case for continued research on the compact city, highlighting many of the same themes that have been reviewed in the two articles above: "Is the compact city a physically and mentally healthy city?", "Is the compact city a green city?", "Is the compact city a safe city in terms of dealing with natural disaster, man-made disaster and providing residents with safe physical and social environments?", "Is it the compact city or a city of compact neighbourhoods?" and "Does the compact city actually exist?" (Dempsey & Jenks 2010: p120). As the final question is concerned with the linkages between the theory and the real world, the authors' contribution serves as an impetus to continue with this discourse of empirical evaluation. As they note, "a wide range of urban forms and scales, for which the compact city has often been mooted as an appropriate model to achieve a more sustainable urban form, require more empirical scrutiny and examination" (Dempsey & Jenks 2010: p120). The compact city ideal is, therefore, to be tested through empirical investigation. And, importantly, this

empirical investigation must grapple with the many trade-offs inherent in projects inspired by compact city principles that discourses of conviction ignore.

2.3.1 Trade-offs between the environmental and other dimensions

A first set of distributional consequences can be found in work that seeks to test the effectiveness of the compact city project in more than the environmental dimension alone. It is important here to acknowledge that there are important methodological difficulties in assessing trade-offs of this kind. Indeed, only a comparison of the effects of a strategy of densification versus those of a strategy of limiting density within the same urban system can provide unequivocal evidence of the existence of trade-offs. Faced with this difficulty, the studies discussed in this section have pursued two different strategies to estimate possible trade-offs between the environmental and other dimensions. The first strategy is to build on observations made across neighbourhoods of different density levels within the same urban system. For example, Dave (2010), in his study of eleven neighbourhoods in metropolitan Mumbai, finds that density, while having a positive contribution to many indicators of sustainability, is associated with less affordable housing. Trade-offs can also be seen when the property industry uses compact city principles to establish city living as a profitable sub-market. Using the case of Leeds, Unsworth (2007) highlights how developments in line with compact city principles have prioritised economic gains over environmental or social ones.

A second strategy is to focus on cities within the same national context and to compare the effects of high and low urban compaction on other dimensions. In their study of 26 municipalities in British Columbia, Alexander and Tomalty (2002) found that while there was an association between density, efficiency of infrastructure provision and reduced car use, it did not necessarily bring greater affordability or access to green space (p403). The same conclusions are reached by two other studies, highlighting the way in which this trade-off seems to have a 'global' character. In their study of 92 towns and cities in Taiwan, Lin and Yang (2006) found that compact city characteristics had positive effects in terms of urban production and enterprise investment but had negative effects in terms of the availability of green-space, crime rates and housing affordability (Lin and Yang 2006). In yet a different context, Thinh et al. (2002) looked at the degree of compactness of the settlement structure of 116 German cities. In their model, compactness is defined as a high degree of surface sealing (the percentage of the total surface that is impermeably covered) – that is, as the degree of concentration of the built-up land in the urban system. For example, compact cities such as Memmingen have, "ideal settlement patterns comprising a densely self-contained built-up area in the centre with self-contained built-up areas radiating outwards" (Thinh et al. 2002: p487). However, when running a cluster analysis on the 116 cities in their sample, they found that two indicators were sufficient to separate out the cities in five distinct groups: the degree of sealing in a city's urban

nucleus and land price in the form of purchase values for developed land (EUR/m2). Both of these two indicators increase together from the first group (in which there is a low degree of sealing in the urban nucleus) to the last – more centrally compact – group of cities, indicating a strong trade-off between compactness in the city centre and affordable land prices.

Those who have studied this trade-off between the economic and environmental dimensions make a number of recommendations. Dave (2010), for example, highlights the need to carefully maintain the quality and level of living space (p23). The capture of compact city principles by the property industry can be changed only through pressures from buyers and renters for higher environmental performance and more demanding planning policies and building regulations. We need to secure policies that can mitigate the negative consequences of compact city policies in terms of affordability and access to green space (Alexander and Tomalty 2002: p403). Some successful policies include involving local residents, promoting affordable housing and seeking more involvement from higher tiers of government (Alexander and Tomalty 2002). In the context of Taiwan, Lin and Yang (2006: p379) recommend, among others, the provision of green space and public facilities, encouraging community greening and putting more responsibility for mitigating environmental impact on developers.

2.3.2 Trade-offs within the social dimension

Another type of distributional consequence relates to the compact city project's effects within the social dimension alone. So far, two main perspectives have been raised on the ways in which compact city principles may lead to trade-offs between different social objectives. The first is that of social sustainability. Bramley and Power (2009) describe this trade-off by using a number of urban form measures (density, house type mix, etc.) in combination with census data for small areas. Here they found that "the effects on our two main dimensions of social sustainability - social equity and sustaining communities - work in opposite directions. Policy must therefore think in terms of trade-offs between social objectives" (p46). This focus on social sustainability can also be found in a study, by Dempsey et al. (2012), of fifteen neighbourhoods across five UK cities. In this study, they specifically focused on the influence of density on social sustainability, finding that while some aspects of social sustainability were positively influenced by density (better access to services, more non-motorised transport), other aspects were more problematic. In higher density areas they found a lower provision and use of public and green spaces, higher feelings of insecurity and generally lower levels of social interaction (Dempsey et al. 2012).

Another perspective on the possible trade-offs that accompany the implementation of compact city principles within the social dimension is that of social equity. Burton's (2000) investigation of the

effects of greater compactness on social equity in 25 medium sized English cities is the first study to take such an approach. The trade-offs she finds are within those aspects of compactness that relate to social equity; for example, compactness may improve public transport use and reduce social segregation, while at the same time is likely to mean less domestic living space and a lack of affordable housing (Burton 2000). She concludes that the compact city project, "may support equity, but only if implemented in such a way that maximises benefits and ameliorates potential problems" (Burton 2000: p1988). Foord (2010), in her study of the London neighbourhood of Clerkenwell, uses a similar framework. She finds that the encouragement of mixed-use developments (an aim often associated with higher density in the UK), led to the prioritisation of certain groups over others, development rarely provided the range of social infrastructure to support communities and, moreover, tended to produce transient communities (p59). This occurs to the detriment of existing communities who cannot engage in a similar high consumption lifestyle (Foord 2010). Similarly, in his comparison of Portland and Seattle, Aurand (2010) finds that for higher densities to support the provision of more affordable housing it needs to be accompanied by a larger variety of housing types.

2.3.3 Trade-offs between individual and collective goals

Other pragmatists focus on the difficulty of applying compact city principles in real world contexts. Downs (2005) identifies eight principles of action that may be problematic in this respect. For example, he discusses how moving from a sprawling urban form to one predicated on smart growth principles would upset the existing benefit structure, with for example, those whose property values were contingent on further suburbanisation likely to lose out. Similarly, smart growth projects necessitate the transfer of powers from local to regional or state authorities; a move that is resisted by officials at all levels (Downs 2005). On the basis of large-scale telephone surveys, Lewis and Baldassare (2010) also find reasons to doubt the easy application of compact city principles. For example, "many respondents desirous of a short commute are also attached to low density and to single-use residential areas, apparently seeing no contradiction. Likewise, individuals who tell survey interviewers they are interested in pedestrian-oriented environments, willing to ride and subsidize transit, and desirous of limiting sprawl may still be unwilling to support compact development when proposed near their homes" (p235). And Vallance et al. (2005) discuss the extent to which perceptions of infill in Christchurch strongly colour local residents' views of compact city projects. All three of these studies propose pragmatic solutions to increase the appeal of compact city policies to those who will be affected by them on the ground.

2.3.4 Maximising or optimising density

A key distinction in practice, and implicit in the discussion of trade-offs, is that between the maximising and optimising of density. A crude position on maximising density is that, to the extent that density brings benefits, greater density will bring greater benefits. The discourse of conviction has tended to focus on the maximisation of density insofar as it has assumed that benefits will simply flow from density rather than asking searching questions about the point at which dis-benefits may outweigh gains. Arguably this is a tactical rather than a naïve position, as advocates of density in an Anglo-American setting have to counter a strong culture of suburbanisation, conceding too soon the limits of density may weaken their position and allow for a push back from proponents of lower density. In that the discourse of suspicion encompasses a more fundamental questioning of state intervention it is more likely to see the market as a mechanism for optimising density. In this free market view, which imperfect information and other market failures, people will exercise choice in the market regarding the density of property that they will either rent or buy. People will weigh up the advantages and disadvantages of density as part of a bundle of characteristics that will make them favour one property over another. Where not left only to the market, the question of optimising density is a key concern, if not a defining characteristic of the discourse of pragmatism. If we are intervening in the market and if we are promoting an increase in density what is the optimal density in any given place?

At the most basic level there is the question of how we measure density and the impacts of different measures. While this may at first appear an easy task, different methods can produce quite different outcomes. If the measure is in units per hectare, then we may achieve a high number of one-bedroom flats, or flats with minimal internal space, which may not provide the desired outcome in terms of mix of property size. This is evidenced in practice through the development of a Density Matrix in the London Plan (section 4). Precisely this problem emerged and the first matrix was amended to focus more on habitable rooms per hectare rather than simply units and to recognise that family sized housing might (or should) be developed in central and inner London (Bowie 2008: 10). Focusing more on habitable rooms recognises the 'trade off' between maximising the number of units and the need for units with more bedrooms for families with children. In both case we can infer the number of residents per hectare by assuming that units are occupied optimally (so a flat with one double and two single bedroom will house four people). However, there is often a gap between what we anticipate through measurement and what people do. People often buy more space when they can afford it (and under-occupy a property) while those with fewer resources will over-occupy to reduce per-person housing costs. Therefore, any measure of density, if not applied with caution, can lead to the production of the wrong mix of unit sizes and, in addition, market

choices and necessity mean that there is no guaranteed link between the 'planned' and actual density of people per hectare achieved. This is significant if we argue a case for there being optimal densities.

To summarise this section, we have set out three positions reflected in the literature, which provide us with the following simplified position. In one corner we have a normatively driven, idealistic cadre of urbanists seeking to push for greater density because it is prerequisite for a more sustainable future. In the second, we see the free market advocates who view state planned density as at best naïve and at worst a sinister attempt to foist on people an urban form that is not in their interest. They therefore seek to challenge more fundamentally the planning process itself. While this position has its own, strong and convincing, internal logic it may be subject to the same criticism as that levelled at Marxist economic analysis. This is that the very strength provided by the logic of a hermetic argument is also a weakness, as it tends to ignore immediate realities. In this case, that reality is that politicians are likely to continue to make policy on density. In the absence of a complete market revolution and the transformation or indeed elimination of state planning, those engaged in 'minimal state' arguments through the discourse of suspicion (O'Toole for example) have relatively little to say on the continued practice of developing at higher density other than it should be left purely to the market. This directs us to the third corner, the discourse of pragmatism that asks questions about optimal levels of density within a planned rather than entirely free market system and which is largely silent on, or assumes, the appropriateness of intervention in the market.

Following Boyko & Cooper we argue that the discourse of conviction rests on a simplified view of density that sees it as "… an independent variable to be manipulated to measure the effects of something else…." (2011: p18). The effect of this is that proponents can take a given theme and use density as a simplistic variable to indicate its good or bad contribution. This hides the complexity of density; that it works in a context, differently with different variables and there is a composite effect. Therefore, we might argue independently that higher density promotes public transport use, as more people can live near to a train station or bus stop. We can also argue that density is socially beneficial as we can provide more social housing as part of wider development. However, once we link these two we may find that the benefits of living near a train station is capitalised through higher property prices meaning that less social housing can be provided within a set budget. While the discourse of suspicion would suggest that this demonstrates the futility of the claims of planners for density, the discourse of pragmatism asks whether the outcome could be further moderated and in so doing starts to engage with the complexity of moving towards, if not achieving all of, the win-win claims that are made for density through the discourse of conviction. Returning to our example, the possible reduction in levels of affordable housing near to transport hubs, there is the potential in

the UK for the use of mechanisms such as legal agreements (Section 106) in order to intervene in this market effect and to provide a proportion of affordable housing. However, as Bowie (2008) demonstrates, while in London the London Plan was strongly supportive of affordable housing, higher density housing has been accompanied by an undersupply of family sized homes. The attempts at balancing market responses and the broader aims of higher density development are complex and it is this complexity that is at the heart of our interest and is returned to in sections five and six where we hear from local planners about their attempts to achieve such a balance and there reflections on the outcomes.

From their extensive review of the literature Boyko & Cooper identify a series of categories of advantages and disadvantages arising from higher density development (Table one). These emerge from all three discourses that we have identified and we use them to indicate the complexity of density and to structure our research, which looks at the extent to which discourses of conviction, suspicion or pragmatism impact on, and are held by practitioners. To what extent do practitioners view and handle density simplistically as an unquestioned good and as an independent variable that will separately lead to a series of gains or, alternatively, do they employ techniques to manage and balance the various and sometimes competing claims for density? In order to address this question we seek first to contextualise contemporary planning practice in England both by looking at long term approaches and attitudes towards density in England and the present structures of planning through which density is currently delivered.

PLACE TABLE ONE ABOUT HERE

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3. The conceptualisation of the 'compact city' in England[2]

Planning reflects national imaginings of the city and country, for example, while the cultural elite's centre of gravity in France is the city, in England it is the country – or at least an imagined rural idyll. The point is illustrated by comparing the suburbs, while the Banlieue of Paris represent the furthest the working class can penetrate into the city (they represent a class exclusion from the centre) the Anglo-American suburb has long represented the furthest the middle classes could get from the city while still being able to commute back in for work[3]. Early modern planning unintentionally set the model for the relatively low density suburb as Howard's Garden City provided the intellectual underpinning first, for Hampstead Garden Suburb and then, through much debasement as a marketing tool, for private sector suburban development drawing on the terminology of the Garden

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[2] This section is based on an earlier web document Anon & Anon 2014 see references for full details.
[3] Whilst, in reality, this is a simplification as there are working class public-housing suburbs in outer London and leafy green *Banlieue* around Paris, the general difference between the two supports the broader point.

City rather than its social principles. Ray Unwin, one of the architects who worked on the first Garden City at Letchworth and later on Hampstead Garden Suburb was influential as a member of the Tudor Walters committee whose recommendations on housing standards, including a density of 12 houses per acre, was institutionalised through the Housing & Town Planning Act of 1919, which set out provisions for public housing. The legacy of the Garden City, including the density provisions of the 1919 Act, does not mean that national policy and planning has had an entirely sanguine relationship with suburban development. The rapid rise of private sector suburbs during the inter-war period took place under a light-touch planning regime where local authorities had limited powers to control the development. The rapid expansion, especially around London, saw the development of early planning legislation including the Restriction of Ribbon Development Act (Ministry of Transport 1935) and greenbelt policy (first mooted by the Greater London Regional Planning Committee in 1935). Although greenbelts sought to address sprawl, policy makers were quiet on any correlation between restricting city boundaries and increasing densities. The greenbelt was not intended to encourage greater density, simply to stop the expansion of the suburbs into the rural heartlands.

New Town policy avoided the need for greater density in cities constrained by greenbelts. They provided planned dispersal from the city in a way that the private sector suburbs had not. The New Towns Act of 1946 and the Town Development Act of 1952 facilitated these. The first wave of New Towns reproduced low-density residential development but away from the old cities. In fact, the low level of density in the new developments led to them being criticised for being more villages than towns as they lacked an urban character – similar to the Garden Cities with which they shared their conceptual roots. The key point here is that New Towns provided clearly defined settlements that didn't sprawl into the countryside, but they did not necessarily provide density.

3.1 The role of the state

If the suburbs were largely built in a permissive context of weak planning, the New Towns were delivered through a planning system, which in England was founded in a strong statist/interventionist philosophy that underpinned the pivotal 1947 Planning Act. This had nationalised the right to develop land, although land remained in private ownership. At the point of conception, it was assumed that the public sector would deliver the vast majority of all new housing and that the explosive private-sector dominated suburbanisation of the inter-war period would never be repeated. At first this assumption was realised as between 1946 and 1950, eighty per cent of all new housing was delivered by the public sector (Hall 2002: p82), some of this via the New Towns programme. While the '47 Act still sets out the basic foundations of planning in the UK, nationalisation of the right to develop, the relationship between market and state has since changed

fundamentally. The significance of this for planning in England is that the system now has a hybrid quality to it. The logic of state control of the right to develop land, combined with a dominant state housing sector, was soon eroded as the private sector took up the development of housing. The oil/energy crisis of 1973 and national budget crises saw the rise of a new narrative where the state would deliver less - this was brought into sharp relief by the election of Thatcher and what was to become the long Conservative administration of 1979-1997, which effectively ended the state's role in developing housing. The result is that the right to develop is still overseen by the state but the resources to develop are almost entirely within the private sector. The state, therefore, has to realise its housing ambitions, including density and the wider ambitions of urban renaissance, through the private sector.

The extent to which the state uses its planning powers in pursuit of wider social goals has waxed and waned over time. The 1968 Planning Act moved away from the emphasis on land use in the 1947 Act, seeking to have planning take into account wider social issues as part of the development process. Under Thatcher the appropriate scope of planning was redefined making it a narrower, regulatory function with its purpose again being broadened under New Labour. Thornley (1991) provides a detailed consideration of the impacts of Thatcherism on planning. Despite the anti-state rhetoric of Thatcher's administration and changes to planning law, the challenge to planning was not unambiguous. As Thornley points out, the administration retained a strong centralist stance, while it sought to curtail the role of local government and local planning, the central state continued to use planning powers including the use of the 'call in' to the Secretary of State. Moreover, some planning policy opened up divisions within the Conservative's constituency. For example, relaxing greenbelt policy is approved of by house builders but raises the ire of the countryside lobby both of which could be seen to be traditional Conservative supporters. This was tested when a new, more development friendly, Planning Circular on the greenbelt was issued in 1983 only to be replaced the following year by one reverting to the previous policy stance (Thornley 1991: p213). Reflecting the point made by Raco (2005); planning is not always predictably captured by business interests (not least because these are not singular) and does not guarantee the roll out of neo-liberal policy.

As in the case of the greenbelt, the Conservative's desire to free up the planning system and to open up land for development has long clashed with their heartland rural vote, which strongly favours the protection of the countryside from major house building. That the UK planning system has become particularly focussed – if not defined by - the preservation of the countryside (Hall 1973) is a point driven home every time figures are produced projecting new housing demand. The 1992 projections released in 1995 generated a storm of criticism, in particular the growth rates for the Southeast (Holmans 2012). It has been argued that a long cultural tradition has made substantial development

in the countryside near to impossible in England, leading Hall (1973) to consider that the '47 Act was the start of a continuing policy of the containment of urban England. This has generated, over a long period of time, deep-seated propertied interests and associated lobbies who have a continuing interest in maintaining stasis within the system. As the countryside and the greenbelt have become institutions, in their own right, political parties, of any hue, have had to deal with entrenched resistance to new housing on greenfield sites. This political reality has only been exaggerated by the long-term shift of economic activity and housing demand to the south and southeast of the country, placing exceptional demand for new housing in the part of the country already most densely settled. While the majority of market evidence suggests that newly forming households wanted street housing often suburban in style (MORI 2002), existing home owners outside the city were determined to prevent the arrival of new neighbours. The Campaign for the Protection of Rural England never tires of reminding politicians how the countryside can only continue to exist by ensuring that future housing demand is met by delivering new households within existing urban boundaries, a policy which has increasingly required higher density housing in the absence of a modern New Towns policy.

3.1.1 High-rise as a component of density

Although high-rise is not necessarily a requirement of higher density and indeed much of the flatted developments of 60s and 70s Britain were not, strictly speaking, high density,[4] we argue that the government's promotion of this urban form left a legacy that had to be countered as part of New Labour's return to the city. Although much public housing up until the Second World War was semi-detached and terraced street properties often in expanding suburbs, the post-war housing grant regime was used to encourage flatted development. Between 1956 and 1967, the scheme paid local authorities higher levels of subsidies for building taller public housing stock – the higher the building the higher the grant, although after 1967 the benefit was capped to six storey buildings. However, if this wave of development challenged the long English tendency to build street properties, the execution of the policy did not represent a turn to high-rise living on the part of the English. Rather, these developments only served to support the doubters, as the high-rise blocks of the period were often poorly constructed and so provided an unsatisfactory environment with damp and/or water ingress being a problem. Insufficient maintenance of communal spaces and lifts also proved problematic in terms of liveability, as did the layout of blocks, which sometimes produced 'dead spaces' seen as encouraging crime. The collapse of one corner of the Rowan Point tower block in 1968 (killing three) galvanised those opposed to high-rise residential development in the UK and neutered the modernist movement in England (Swenarton 2002). Even when the stock was of better

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[4] If one measures density across an entire site (as opposed to the footprint of the building), these high-rise blocks were often not producing higher density urban forms than the street properties they replaced.

quality there were problems in practice. For example, towers that were surrounded by large aprons of grass produced maintenance and care issues as there were not clear demarcations of who was responsible for upkeep. Moreover, these buildings were commonly located outside the city on cheaper land away from public transport links and sources of employment (these were British Banlieue); Salford offers one of many examples of such 'island high-rise' estates in England.

Density has therefore often been associated with past forays into high-rise living in England, which have not tended to be marked by success. This has meant that there was little to suggest that the British middle classes were ready and willing to embrace an urban renaissance predicated on images of 'city', 'density', and 'apartment life'. For some who saw high-rise to be a failure in the UK but who supported density there was no problem, as a number of writers showed, traditional street patterns and street front development could produce equal or higher densities than the much maligned high-rise (Schoon 2001: p250). However, Bowie (2008) strongly contests this, arguing that development at the density seen in London in the 2000s is inevitably delivered through high-rise. Despite the claims of those of who have sought to uncouple higher density and high-rise, Bowie's position appears o be validated by the extent to which post-millennial higher density development was delivered through mid and high-rise development and not street properties.

3.2 From greenfield to brown

As we have seen, the long tradition in England is of dispersal and suburbanisation. Recent environmental/sustainability discourse as it relates to planning in England can be crudely divided into two key phases, which are only partly contiguous with changes in national administration. An essential element of the roll-out of neo-liberalism was a physical rolling out of development into suburban and peripheral areas (see Peck 2011 for a discussion of the American case); this period covers roughly 1979 to 1990. From the 1990s we see elements of roll-back as the Conservative administration met with growing opposition (not least from its own support base) to the development of swathes of retail sheds and new housing on greenfield sites (Lord & Tewdwr-Jones 2012; Allmendinger & Houghton 2013). The New Labour administration, post 1997, continued the roll-back, but whereas the emphasis had previously been on protecting the countryside now the focus was also on a positive vision of how the city could deliver economic, social and environmental solutions.

- 1979- early 1990s: Early Conservative administration; roll-back of planning, development of edge of town development;
- Early 1990s to 1997: later Conservative introduction of restrictions in response to earlier policy outcomes. Restrictions on peripheral development; increasing stress on sustainability.

- 1997-2010: 'New' Labour administration; continuation of neo-liberal principles of former administration. Roll out of array of 'neo-liberal' social, environmental and economic programmes; but more positively focussed on the city (urban regeneration & renaissance).
- 2010-present: coalition government; roll back of programmes, localism as metaphor for smaller central government. Potentially a roll out of development to fringe and rural areas.

As we have already seen, the Thatcher project as it related to planning was not a simple, unambiguous case of laissez-faire even while Thatcher was Prime Minister. Moreover, in the later years of the long Conservative administration, in particular when John Major was Prime Minister (1990-1997), there was a less ideological approach to planning; most significantly for this work, under John Gummer (SoS for the environment 1993-97), the laissez-faire approach to, for example, out of town shopping came to end with the updating of government guidance on retail (DoE 1993; DoE 1996) and on transport (DoT 1994). When New Labour came to power in 1997 they continued the restorative work started by Gummer, attempting to reign-in further the tendency to out of town development that had taken off during the Thatcher years, especially the explosive growth of out of town retail development. Despite changing administrations basic tensions in the planning and supply of housing remained. New Labour in many respects represented a continuation of the previous administration, not least in terms of the relationship between the state and private sector. New Labour did not seek to reverse the withdrawal of the state from the direct provision of housing and faced a continuing problem with housing undersupply. The 1996 projection for new housing need was released in 1999 (now under the New Labour administration), and predictably saw a similar furore to that accompanying the release of previous projections with press reports talking of the paving over of rural England.

3.3 Urban renaissance

There were early portents of how New Labour would address housing demand. On coming to power in 1997, the new Prime Minister, Tony Blair, moved to number 10 Downing Street from his family home in Islington N1; this inner-city move predicated a policy framework that conceived of the city in positive terms and was, arguably, revolutionary in a country where the idea of the suburbs as a desirable permanent residential location for the middle-class family first saw the light of day (Fishman 1987). In the run up to the end of the millennium, in the years after Blair had moved from London N1 to SW1, the government started to formulate a policy approach to the city that saw it as a positive place where social challenges could be addressed rather than as the place where social problems were simply concentrated and over-represented (Hoskins & Tallon, 2004). In this rethinking of the city, the administration was greatly assisted by a quiet, private movement that had been underway for several decades. Islington, the location of Blair's former home, was where Glass

had, in the 1960s, observed the encroachment of the middle-class into previously working-class neighbourhoods of the inner-city, coining the term gentrification to describe this change (Glass 1964). Long before changes in government policy promoting the city as a residential location, elements of the middle-class had already chosen it over the suburbs. When the Urban Task Force (1999) set out its vision for the revitalisation of the city by bringing in a broader middle-class residential population it drew on the existing symbolism of gentrification, red wine and coffee houses. This lead Lees (2003), in deconstructing the report's language, to argue that the term urban renaissance simply provided cover for the entirely less acceptable outcome, gentrification. Regardless of the politics of gentrification, the Urban Task Force were to some extent pushing at an open door. Their proposals resonated with broader changes in the economy associated with globalisation, including the agglomeration of key functions in cities. Linked to this, New Labour's leadership has a distinctly metropolitan edge to it, making it part of the new city zeitgeist. The new city-focused economy was driven by an economic logic that New Labour had no intention of resisting but which could be supported by socially progressive claims as the urban provided a focus for house building that now had a rationale founded in sustainability and which had the additional benefit of avoiding political resistance to new house building on greenfield land. Notwithstanding this broad shift, the Task Force was ambitious in seeking to broaden out the appeal of city living beyond, as there is reason to believe that there are substantial cultural differences within the middle-class between gentrifiers and those who opt for suburban living (Butler with Robson 2005).

Having been out of power for 17 years, New Labour brought in a tide of reforms, which, although they appeared to be coherent in the rhetoric, were less so in the detail. It was often the local authorities that had the task of stitching it all together in practice (Colomb 2007). The new focus on building at higher densities in cities promised, among other things, reduced social division through proximity, reduced car use by linking work-residential location and with density supporting public transport use and preventing the need for new infrastructure associated with greenfield development. The challenge of 'joining the dots' to deliver the win-win claims of New Labour was made more difficult for planners by fissures within government. The two key relationships that impacted planning were first, that between the Treasury and the Office of the Deputy Prime Minister (ODPM), which oversaw planning and, second, internal divisions within the ODPM. This first can broadly be summarised as a tension between the Treasury that saw planning negatively as a constraint on economic development and the ODPM that viewed planning as potentially a useful tool to serve the wider social purposes of the government. The Treasury/ODPM relationship continued the long standing critique of planning as a brake on the economy, it failed to deliver enough housing in the right places, large scale infrastructure was held up by interminable inquiries

and business was restricted in its ability to respond to changing economic circumstances. Significantly, it was the Treasury that put forward Kate Barker to lead a review of the planning process (2005-06) and, in particular, the delivery of housing. This provided a narrative unashamedly focused on the economic while the ODPM was developing the sustainability meta-narrative that sought to provide a new unifying purpose for the profession after the wilderness years under the long Conservative administration. In practice, while the ODPM was making expansive claims for the purpose of planning the Treasury was applying pressure to achieve a more narrowly focused economic agenda. One way of partially resolving this impasse, on which both the Treasury and the ODPM could agree, was to make planning demonstrably more efficient. Under the rubric of New Public Management planning was charged with meeting a range of outputs (rather than outcomes); this had the effect of focusing planning on a narrow range of targets such as time taken to determine an application and so, arguably, diverted planners from the broader, and less readily measured, claims for density which formed part of the wider agenda of the ODPM.

The result of this tension between Treasury desires to speed up planning and make it more market friendly, and ODPM ideas of creating a new meta-narrative for the profession, was that planning, while newly re-focused on sustainability was constantly reminded of the weight of the economic argument. It had always to be justified in terms of its own efficiency. Clearly related to the rise of New Public Management, the more utopian rhetoric of the ODPM in defining a new purpose for planning was accompanied by the introduction of a bank of targets; in addition to timescales for determining applications, these included timescales for plan development, a focus on housing numbers and on the proportion delivered on previously used land. The Sustainable Communities Plan (Sustainable Communities: Building for the Future), (ODPM 2003), illustrated the Treasury-ODPM tension. This document is notable for employing the dual empty signifiers of sustainable and community in its title and thus provided the right mood music for the ODPM, which was important as it allowed them to deliver what was, in essence, a Treasury driven national policy on housing development. Previous attempts to do so had traditionally met with strong opposition as they were considered to be insensitive to local communities and to the environment. Sustainable communities were to be delivered through a new regional approach to housing delivery reflecting Treasury demands to privilege the shift of the economy to the south. The Sustainable Communities Plan set out high levels of housing development in the south of England and the promise of some regeneration for the North. Reflecting the instrumentalisation of 'compact cities', in the North it would provide a reimaging of former industrial cities while in the south it would meet the need for more housing under conditions of urban containment.

Planning's role was fluid and in practice sometimes peripheral with emphasis on particular targets rather than the unifying strategic vision that spatial planning was claimed to deliver. Moreover, it was not always evident at first what influence the emerging mix of policy and targets would have in relation to one another. Nowhere is this more evident than in the case of policy on density and targets for the re-use of brownfield land. Under New Labour the minimum density target in national policy was a very modest 30dph. Having a minimum target may have sent out a signal that the government wanted higher density but the threshold was a low one which, we might speculate, was modest by political necessity as a higher minimum target would have raised the ire of local politicians in more suburban and rural authorities. However, targets for the proportion of housing on brownfield land were far more significant in terms of driving a new form of higher density development as the location and nature of these sites required density to achieve viability (Karadimitriou 2013).

As we turn to the London case studies it is useful to summarise the context in which local authorities were tasked with delivering the urban renaissance, included in which was a turn to a higher density built form.

- A long-term culture of lower density development
    - Unsuccessful experience of high rise – which inaccurately equates to higher density in the public imagination
- Shifting political ambitions for planning which over decades contracted and expanded ambitions for planning

The significance of this was

- Planners had limited experience of delivering quality through higher density
- Politicians had good reason to oversell the benefits of higher density/ urban renaissance; not least, to overcome popular tastes for lower density living.
- Planners were newly linked with an ambitious, if not always coherent, agenda marked by a mix of new policy and targets

4. The case of London

The historic emphasis in the UK on urban dispersal applied to London as to elsewhere. This happened both through official policy such as New Towns and market responses, mainly suburbanisation. As a result, London lost population between 1931 and 1991, although for decades it was only present-day inner London that lost population (not least to outer London). After 1961 outer London also started to lose population, both have been gaining population since 1991. It does

not follow that changes in policy are solely, even primarily responsible for these changes; the drift of employers to the suburbs provides at least part of the explanation for the earlier loss of population just as the later turn to the city is reflective of changing employment patterns sometimes associated with globalisation. Globalisation has brought both wealth and distress, often in close proximity, but taken as a whole London has been one of the winners. The London and southeast economy has increasingly pulled away from the rest of the UK. The economic 'successes' of London are reflected in the property and employment sectors. The central London housing market has become increasingly global as international investors develop property portfolios in London and this has impacted demand and prices beyond the centre (Hamnett 2009). Just as London was impacted only moderately by the Depression of the 1930s (there was a massive boom in house building in London in this inter-war period), the current economic turndown has only had a modest impact.

London, therefore, remains both a fascinating testing ground that warrants study but also a perennial exception. This applies to the economics of housing as to so many other aspects of policy and society (Karadimitriou 2013). We pick up on some of this exceptionalism as we continue but here we note that London is also exceptional within the UK it its planning and governance arrangements. After coming to power in 2010 the coalition government (Conservative dominated with Liberal-Democrat partners), abolished the regional structure of governing and planning in England. The devolved and distinctive administrations of Scotland, Wales and Northern Ireland remain but in England all regions were abolished except in London where the Greater London Authority remains as a 'regional' authority that sits between the national government and the London Boroughs. Uniquely in London, there remains a regional plan that sits between the National Planning Policy Framework (NPPF) (DCLG 2012), that the coalition government has introduced, and the local plans of the 32 boroughs (plus the City of London). The London Plan has been through a series of alterations since its adoption in 2004 but we focus here on the original plan as this set the context for the developments that we look at later. The 2004 London Plan projected sustained growth in economy, jobs and households. It estimated an additional 336,000 new households in the capital by 2016 equating to an addition of 22,400 households per annum. Significantly, Mayor Ken Livingston set out the intention of containing London's growth within its existing borders, a radical break from London's suburban expansions in the Victorian and the inter-war periods: "Having already absorbed the equivalent of the population of Sheffield in the last 15 years, London is expected to grow by the equivalent of population of Leeds in the next decade and half. To sustain and improve London's environment, this increase must be absorbed without expansion into the existing greenbelt or encroaching on London's internal green spaces" (GLA 2004: pxi). It is noteworthy that since the 2004 Plan, later data have indicated even stronger growth than expected

in London's population, between the 2001 and 2011 Census the population of London has increased by 14%, a million people, to 8.17 million with a greater increase in inner London (17%) than in outer London (12%).

The Plan outlined a Density Matrix that set a, " strategic framework for appropriate densities at different locations, [that], aims to reflect and enhance existing local character by relating the accessibility of an area to appropriate development and the number of car parking spaces that should be provided" (GLA 2004: p176). London density policy had evolved from the mid 1990s, prior to the establishing of the GLA. When the Density Matrix approach found its place in the 2004 London Plan it emphasised higher density development based on a six-point public transport accessibility level (PTAL; where six was best served and one least), the character of location (mentioned as 'setting' distinguished as suburban, urban and central) and the character of the development (design of typology, scale and massing) (Maccreanor Lavington et al. 2012; URS/Patel Taylor 2006). Based on these characteristics the density range suggested varied from 650-1100 hr/ha (habitable rooms per hectare) in central urban areas that are 10 minutes walking distance of a town centre, and with a PTAL of 6-4 (best access to public transport), to 150-200 hr/ha in remote suburban areas (PTAL of 2-1). The Plan therefore called on Boroughs to maximize the potential of development sites and sets out a Density Matrix as a guideline in order to enable, "developments [to] achieve this highest possible intensity of use" compatible with the above mentioned criteria (GLA 2004: p176 section 4B.3).

The planning system is legally a hierarchical one so that the lower plan must always be in general conformity with the higher plan. In effect, the regional London Plan written by the Mayor of London must help deliver the aspirations set out in national planning documents. Likewise, the borough plans must each support the delivery of the London Plan (and so, logically, will support the delivery of national policy). Although the coalition government has made much of (sub-borough) localism and has facilitated the development of neighbourhood plans, these must, in turn, support the borough plan. Therefore, local plans are only able to add detail to, rather than articulate an alternative vision to, regional (in London) and national policy. In short, the planning system now incorporates a localised centralism. As well as adding detail to higher tier policy, lower tier plans can add policy so long as this does not undermine other higher tier policies. This applies to the London Plan density policies but here the NPPF is permissive as it simply states that, "To boost significantly the supply of housing, local planning authorities should: ...set out their own approach to housing density to reflect local circumstances." (NPPF 2012: p12). Therefore, while subject to refinement the Density Matrix has survived the change of national government.

In this rest of this section we set out our London case-study which looks at developments in four London Boroughs; Tower Hamlets and Newham in inner London, and Barking & Dagenham and Croydon in outer London. The four study developments were selected using GLA (Greater London Authority) supplied data which recorded all permitted and completed development over 50 units in London since 2004 (the year of adoption of the first London Plan since the creation of the GLA which reinforced central government policy on increasing density and seeking development on previously used land). A balance of density and number of units was taken in to account (avoiding some authorities with very high density development but low numbers of units overall) with the aim of identifying authorities with experience of assessing applications that are, in a London context, at volume and at higher density. Two authorities were chosen from outer and two from inner London as this provided an opportunity to pick up on differences between these two contexts; inner city and suburban.

In the period 2001 to 2011 Tower Hamlets has seen the greatest increase in number of households far outstripping the rate of increase in any other London borough. The two outer London boroughs have seen more modest growth. Tower Hamlets also has the highest density of population of the four study boroughs (Table two). These figures are relevant in that an older or younger, non-working age population might be expected to require more in terms of services. Barking and Dagenham is the London borough with the highest proportion of 0-15 year olds but the other boroughs in the study are not far behind. Newham and Tower Hamlets also have a relatively young age profile with fewer residents aged 65 and over (Table two). Using the GLA's Black and Minority Ethnic (BME) category (broadly Asian, Chinese and Black British), Newham and Tower Hamlets have a majority BME population[5]. Average household size has increased in London over the same period from 2.35 to 2.47persons and is highest in Newham at 3.01, which is noteable given the tendency to build one and two bedroom flats during this period. Brief details of the four developments are provided below before we turn to consider the research findings.

INSERT TABLE TWO AROUND HERE

All four of the case study boroughs were and are expected to contribute substantially to future housing need in London. In the 2004 London Plan the 20 year target minimum targets for the provision of conventional homes (not students housing or houses in multiple occupation) was as follows: Barking & Dagenham, 10,110; Croydon, 17,020; Newham, 17,1770; and Tower Hamlets, 41,280 where the all-London range (excluding the City of London) was between 5360 (Richmond) and 41,280 (Tower hamlets). The capacity of London boroughs to accommodate new housing was

[5] http://data.london.gov.uk/visualisations/atlas/borough-profiles/atlas.html

and is not related to their current population density so boroughs with large amounts of open space and/or lower density housing may have far lower identified capacity than those with higher density populations (Figure one). This is partly a function of greenbelt policy where Bromley is the most extreme example, the largest of London's boroughs at just over 150km^2 more than half (80km^2) is metropolitan greenbelt. There is, therefore, no clear link between future housing capacity and current population density meaning that some of the most dense boroughs will also host the greatest amount of future housing (Tower Hamlets, Southwark) while some of the least dense will see the least amount of new development (Richmond upon Thames, Merton).

PLACE FIGURE ONE ABOUT HERE

The overall geography of new build is to the east of London, which is reflected in the location of our case studies (Figure two). This eastward bias is driven by a range of influences including the long-standing Thames Gateway initiative which conceives of a development corridor running from the east end of London along the Thames deep into Essex as far as Southend and in Kent to Sheerness. Linked to the London end of Thames Gateway is the Olympic 2012 site with the development for and after the Olympics also bringing forward other projects. In a longer historical context the area is one that was historically industrial and so there is a large quantity of previously used land available across the area.

PLACE FIGURE TWO ABOUT HERE

Although, for those less familiar with London the Barking site may appear quite close to the inner London sites, on the ground there are marked differences. The Tower Hamlets site sits close to the centre of Docklands, London's second finance core and the Newham site is near to the Olympic 2012 site. The Dagenham site sits to the east of one of London's orbital roads (A406 North Circular) and so 'feels' a lot further away from central London than the other two locations. Some interesting contrasts appear when we look at the change in the density of new dwellings per hectare in the four case study boroughs over time and these serve to emphasise the locational difference between the inner London boroughs of Newham and Tower Hamlets and the outer ones of Barking and Dagenham and Croydon. In Figure three we show the change between 1996 and 2011. We have also looked at three administrative districts (roughly equivalent to the London Boroughs) that neighbour Greater London and which have the highest (Watford), mid (Spelthorne) and lowest (Three Rivers) amount of change. Watford and Three Rivers are to the northwest of London both in the county of Hertfordshire and Spelthorne is to the southwest in Surrey. There is a marked difference in the

density of new development between our two outer and two inner London boroughs. Tower Hamlet's new dwellings were built at 96dph in 1996 but by 2011 this has leapt to 385dph, an increase in the density of new build of 289dph. In other words a substantially different urban form is being delivered in the borough. The picture is similar in Newham. However, our outer London studies are more closely aligned with changes in density occurring in neighbouring districts outside London (and not affected by the London Plan). Although Croydon has increased the density of new build more than Watford (outside of London), it is still building at a slightly lower density (86dph against 87dph). The 2011 mid-point for districts neighbouring London was 29dph and Spelthorne was the nearest to this at 27dph. Finally, Three Rivers shows a decrease over the period of -4 moving from 25 to 21dph for new build. This is not exceptional as three other districts showed no change (out of a total of 16 districts neighbouring London).

PLACE FIGURE THREE ABOUT HERE

As noted earlier the London Plan Density Matrix sets out a range of densities depending on a number of criteria including access to public transport (measured as a Passenger Transport Accessibility Level or PTAL), and the existing setting including current densities, and where proximity to a town centre is a factor in producing an assessment of character; suburban, urban etc. The matrix therefore includes a precisely quantified element (PTAL) and a more open element (setting). All of our case studies are in the PTAL range 6-4 and we assessed them all in the urban setting (see Figure four). All of the developments are well in excess of this reading of the Density Matrix and, even were the developments to be categorised as being in a central location, only the Croydon development would be within the given range. This is reflective of Bowie's (2008) work on development in London, which shows the high proportion of approvals for development in excess of the London Plan Density Matrix, a point we return to later.

PLACE FIGURE FOUR ABOUT HERE

4.1 Methods

We carried out an online survey of all London heads of policy and development management teams. In total we received 17 responses from a possible 66 (26%). These covered 16 of London's 32 boroughs (plus the City of London), with 7 responses from inner London and 9 from outer. In the four case study areas we interviewed local government officers and building managers. The purpose was to focus on coordination through the various stages of delivering and managing density. On the

delivery side, we focused on the relationship between policy (at different scales) and development management decisions, in how decisions were made about particular applications. We also sought to have local planning officers in planning reflect on what had been delivered. On the management, or living with density side, we focused on the day-to-day aspects of managing the building. Given the different roles we asked different questions of site managers and council officers. The aim was to look primarily at the decision making process but also to capture the outcomes of those decisions from the perspective of managing the resulting development.

To understand the diversity of views from practice, we solicited interviews from the head of planning, head of planning policy and head of development management from the respective Boroughs. The purpose was to focus on coordination through the various stages of delivering and managing density. On the delivery side, we focused on the relationship between policy (at different scales) and development management decisions, in how decisions were made about particular applications. Some boroughs delegated one planning officer to talk on behalf of the council, while in others more than one officer obliged. In one of the boroughs two officers jointly attended and shared their diverse perspectives on density and development during the interview. All the senior planners that we interviewed had worked for their local authorities for a considerable period (between 5- 20 years), and had experience of working in other local authorities in London. They therefore knew not only the planning and development context of their boroughs, but also the broader policy context in London overall. Our survey respondents also had considerable experience of their Borough; ten had worked in their current authority for more than ten years, six for 1-5 years and one less than a year. The interviewees used many examples from their Borough during the discussions and were also encouraged to reflect on the selected case studies. This helped us to ground the discussions, particularly on the various forms of conflicts during the process and the lessons learned.

Individual interviews lasted for about an hour and were conducted as a face-to-face discussion based on a set of semi-structured questions. The questions not only acted as a guide during the discussion but also enabled a system for comparison. Our questions primarily focused on four core themes. The first tried to gain an insight into officer's knowledge and experience of managing higher density development. In this case we wanted them to engage with their perceptions and understanding about the drivers of density and how, if at all, ideas about sustainability or the compact city influenced the understanding of higher density development in the Borough. Our second theme engaged with specific planning and policy instruments and the institutional system for managing density. We were particularly concerned with the interaction between local, regional and national policies; the relationship to the provision of social infrastructure; the use of evidence in local policy;

the adequacy and sufficiency of existing planning powers; and the measures for mitigating the potentially negative impacts of density. The third theme engaged with diverse expectations and preferences about development and density and the resulting conflicts that arise from diversity and their management. For example we explored themes like the dynamic relationship between planning officers and the council; the role of authorities while leading, following and controlling market preferences; the relationship between policy and development management practice; engagement with local politicians and local community; the balance sought between the social environmental and economic aspects of the compact city and finally the art of negotiating with diverse actors. The final theme examined the mechanisms that exist to learn from already-implemented projects and their outcomes and the how these might influence the evolution of future policy and planning processes. Obtaining interviews with planning officers was easier than for building managers and interviewing building managers in the private blocks proved harder than interviewing the managers of the social housing blocks. In fact, in one development it proved impossible to interview the property manager of a particularly 'high-end' block of flats and in another the project manager only felt comfortable filing in a structured questionnaire after obtaining clearance from the developer. However, the housing managers of the social housing blocks obliged more willingly. Our questions to the housing managers focused around issues of day-to-day management of the development. We were particularly interested in the economic, environmental and social robustness of the built form; the environmental performance of the building; costs passed on to residents; perceptions of its internal space standards; use of and performance of outdoor space and in any recurring problems of management, especially where those problems were linked to higher density development.

Having interviewed officers and building managers in the four case study boroughs we transcribed all the data and coded it in Nvivo. We had four key coding categories (or nodes); claims, views, plans and process. For claims the coding was structured around Boyko & Cooper's categories of 'claims' for density. Further coding under this category included the influence of the market on the claims for density. The second major node captured references to professional, political and public attitudes to density; here we recorded reference to the political, social and professional realities of delivering density. We were interested in the possible gap between professional views, where we assumed that delivering higher density would form part of the professional canon of planners and possible opposition from public and, possibly therefore, local politicians. The third node coded for references to national, regional and local policy, as we were interested in perceptions of which were the more influential. The final node coded for references to the process of delivery, looking at the relationship between formal policy and how decisions were actually made. This node includes sub-

categories for experience and learning – where evidence emerged from the interviews about formal and informal processes for learning, reflection and for feeding past experience into future policy and decision making processes.

4.2 Barking and Dagenham

The borough of Barking and Dagenham encompasses two distinct areas in east London with Dagenham being closely associated with a large Ford plant that once produced cars but is now a specialist engine plant. The borough is a mix of social and private housing much of it produced during the mid twentieth century at lower density. The borough includes the Beacontree Estate, which was developed by the London County Council in the 1920s, and 30s and is still one of largest public housing estates in Europe containing 30,000 homes. These were built as street properties with front and back gardens at suburban densities of around 12 units per acre and so are physically very different from the suburban banlieue which house the French working class. Beacontree, along with other public housing estates and private housing development, provided an escape from the poor housing conditions of inner London at the time when rent controls had the unintended consequence of restricting the supply of affordable rented accommodation. Therefore, people were pushed to the suburbs as much as pulled there and initially poor transport links back to jobs in the central city meant that some families chose to relocate back in the inner city (Saint 1989). Just as London saw its population fall so too did Barking, with census figures revealing an overall decline in population between 1951-1991. However, as part of the more general trend in London the borough has seen sharp rises in population during the recent period.

The case study development was part of the Barking Town Centre redevelopment; the outline planning permission of which was given in 2002 to be developed in phases; the final phase of which was completed in 2007 (with planning permission to specific phases being granted in phases) and is built to a density of 423u/ha. The town centre redevelopment comprised an area of 1.6ha situated to the front of the Town Hall and Square close to shops and town centre uses with a high level of connectivity, scoring a PTAL of 6. The case study sites comprise of the building of 246 residential units, 2577m^2 of retail, 7445m^2 of office and a net increase of 3575m^2 of community/public uses (Barking & Dagenham 2004). Barking town centre is defined as a district centre in the London Plan and so the area is considered urban for the purposes of the London Plan Density Matrix. Even though less than 2ha this scheme was designed to 'define its own setting' as a landmark for the Town Centre.

Figure five shows part of the development much of which sits on former open-space which formed part of a public space outside the town hall (pictured, figure five). The image in the right of Figure

five illustrates the pre-existing scale of development in the area where the tower of the town hall would once have dominated the skyline.

PLACE FIGURE FIVE ABOUT HERE

4.3 Croydon

The second case is in the London Borough of Croydon, arguably the only part of the capital that includes an edge city (Phelps et al 2006), which is to the southeast of the case study development. The borough has good transport links including orbital connections across south London. It has a history as a centre for manufacturing including car production and was the site of an airport which ceased to function as London grew. It remains, however, relatively close to Gatwick one of London's main airports. It has only experienced brief periods of population decline, the last between 1971 and 1981. Historically the council has been unusually positive for a suburban borough in promoting the development of Croydon town centre and continues to actively seek its regeneration and redevelopment as an edge city office centre. However, while the borough promotes edge city development outside the 'city' sub-centre much of the borough remains a typical outer London location characterised by substantial tracts of inter war suburban development, much of this being private housing.

The case study development was completed in 2008 and is built to a density of 399u/ha. It comprises, "[the] demolition of no 3 Broad Green Avenue; alterations to existing City House to include recladding of existing building and use of ground floor for commercial / nursery use and upper floors as residential accommodation; erection of a four/five/six/seven storey building fronting Campbell Road and a three/ four/five/six storey building fronting Broad Green Avenue, providing a total of 36 studio flats, 109 one bedroom flats, 138 two bedroom flats and 36 three bedroom flats; alterations to vehicular accesses and provision of basement parking" (Croydon 2006). Of this 37.5% of the units were proposed as affordable units in the application; 78% social housing and 22% intermediate. Again, the church in the left-hand image of Figure six indicates the earlier scale of building in the area as do the semi-detached inter-war housing to the back and back-right of the right-hand image.

PLACE FIGURE SIX ABOUT HERE

4.4 Newham

The third study is from an inner London borough, Newham, to the east of central London. Based around the historic settlements of East Ham and West Ham the borough is in East London which is, overall, the poorer part of the capital. Newham lost population between 1931 and 1981 but has been growing its population since. Newham was one of six host boroughs for the 2012 London Olympics and it encompasses the main stadium and other key facilities. In recent years the borough has seen major investment in transport with Stratford forming one of London's major transport hubs. Linked to these factors, the area in which our case study sits has seen dramatic transformation over recent years.

The case study development was built along the Stratford High Street and was completed in 2008 and is built to a density of 513u/ha. The development is bordered to the northwest by the Bow Back River and to the southeast by the A11 road and its flyover. With the exception of an adjacent office building that was converted to residential large infrastructure and industrial buildings dominate the site. The site had a PTAL score of 4 and was sited within and area considered 'Central' in setting. This implies that an appropriate density would be between 650-1100 hr/ha. However the final scheme was proposed for a density that greatly exceeded this (1371 hr/ha). This was justified in the design and access statement (supplied as part of a planning application), by noting that the development would be fitting given the local context and met with the "…Council's priority for development". The final development, as per the planning permission comprises of, "…a mixed use scheme [of] 301 residential units [with] 122 affordable, 654m^2 of commercial space together with associated car parking and amenity space including new river access & public realm" (Newham 2005).

Figure seven shows the block from the main road (left-hand image) and to the rear (right-hand image) leading down to the New River waterway that the blue tower overlooks.

PLACE FIGURE SEVEN AROUND HERE

4.5 Tower Hamlets

The London Borough of Tower Hamlets is an inner London Borough to the east of London. Between 1901 and 2001 is saw a steady and strong loss of population to about a third of its 1901 peak, it has gained population since 2001. These losses reflect among other factors, a long term drift to suburbs, extensive bomb damage during the Second World War and policies of dispersal to new towns. The slow decline and eventual total closure of the docks saw a loss of employment and population, the

borough now includes the Docklands development, effectively a second banking and finance core alongside the City of London.

The case study development (Figure eight) was completed in 2010 and is built to a density of 926u/ha – much higher than the London Plan density range. It is located in the Isle of Dogs near to the high-rise Canary Wharf cluster that is a major centre, and was built on a site of unused light industrial units that was 3-4 stories high. It is well connected served with DLR, tube and bus routes. It comprises, "[The] construction of one building of 44 storeys, one building of 30 storeys and two buildings of eight storeys to provide 802 dwellings, and a total of 3,267m^2 of retail (A1, A2, A3), Office (B1) and Community Uses (D1) at lower ground, ground and level 15,833 plant, public spaces and parking" (Tower Hamlets 2006). Tower Hamlets, Newham and Barking and Dagenham are all part of the Thames Gateway project, mentioned previously, and so all three are areas in which a high level of new development has taken, and will likely be taking place.

PLACE FIGURE EIGHT ABOUT HERE

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5. Delivering density

We turn in this section to look at the extent to which planners move beyond simplistic conviction claims and recognise and seek to balance the benefits with the dis-benefits of density, in other words, do they attempt to address the issues raised by discourses of pragmatism, and if so, how? We structure this section around four observations that are all, in various ways, linked to the hierarchical setting in which density is delivered.

- Planners are inheritors of conviction claims.
- They are at the interface between conviction and pragmatist discourses.
  - This produce great complexity for planners; this appears to be managed by recourse to the security of tried and tested procedures.
- There was evidence in practice of seeking to balance the benefits and costs of density and of considerable reflection. How/whether this local learning is transmitted is unclear.

5.1 Local planning and the three discourses.

First, and as we might have expected, local planners did not appear to engage with the discourse of suspicion. At its extreme the discourse is philosophically anti-state planning and so we might reasonably expect someone whose chosen career is in state planning to have discounted this aspect

of the discourse of suspicion. However, the discourse also includes those who see a role for planning but one that is more sensitive to the market. Although this element of the discourse is at least open to state planning in principle, it raises questions about the role and extent of planning that cannot easily be answered at the local level. Local planners are required to write plans and determine applications within the requirements of national policy and planning law. If they, or local members, seek to challenge the premise of higher tier plans (including assumptions about the degree of intervention in the market), this is likely to bring the planner into difficult confrontations (Mace 2013). This is one reason why there was no evidence of any fundamental questioning of density policy along the lines suggested by the discourse of suspicion. Even where there might be sympathy with discourses of suspicion, individuals would also be well aware that these would only take place over a long timescale and they are engaged with more immediate day-to-day demands. The planners interviewed reflected the context in which they worked. In a London setting several referred to the usefulness of density in delivering a greater quantity of housing, on a limited supply of land, a proportion of which would affordable and so further social policy aims. Though we did not directly ask our interviewees to challenge the premise behind urban containment and density, it was notable that none sought to counter the overall context of the London Plan policy (one accepting of containment and the greenbelt). This is exemplified through the need to maximise the use of available land in their respective boroughs which was described in terms of the earlier policy requirements: to accommodate London's growing population within its own borders and to maximise the use of brownfield sites. These were viewed simply as givens, acquired from higher tier plans and therefore immutable. In this sense, the need for higher density was seen as a simple necessity arising from limited land availability in London and borough housing targets.

[higher density is] making best use of our precious brownfield land because if you're not optimising the use of your brownfield land sites, that puts more pressure on your greenfield land sites and your open space. So I think that's the other benefit, it helps, you know, it helps protect valuable green space in the borough as well.

Barking & Dagenham planning officer 1.

The NPPF [National Planning Policy framework] obviously prioritises the reuse of previously developed land, which means that development requirements of whatever land use are sequentially aimed at the urban area, which obviously has an impact on the density of development to be accommodated in already a defined urban area.

Croydon planning officer 1.

What we have in London is a situation where with the adoption of the original London Plan, there was a decision made to accommodate London's growth within its boundaries. The only way you can realistically do that is to boost density and obviously there are arguments around sustainability, there arguments around reuse of brownfield land, protecting green land. It's... I think it's viewed as a way of using land in the most efficient way possible.

Newham planning officer 1.

Barking & Dagenham planning officer one's observation is perfectly reasonable within the framework of existing policy but does not question if the framework is in any way flawed or if alternatives might be developed. This reflects the hierarchical nature of the planning system with local planners being responsible for delivering housing locally within the framework set by national and regional policy. Whether our interviewees harboured suspicion of policy or not, they described how they were delivering policy set at a higher level and which they had no alternative but to adhere to.

Given that London's boroughs guard their territory jealously and have historically had a tense and testy relationship with London wide authorities (Travers 2004), this may be surprising. The London Plan, produced by the Mayor, forms part of each local borough's development plan. This was a significant change initiated in 2004, giving the Mayor legal leverage over the In the early days of the new system attempts by boroughs to test the extent to which local plans could seek to moderate the London Plan saw the statutory process back the Mayor against the claims of local political interests (Mace 2013). Our interviewees referred to the authority of the London Plan on numerous occasions, but there was no evidence of any antipathy between the local and regional planners; rather the approach was one of acceptance and/or common purpose.

What we have in London is a situation where with the adoption of the original London Plan, there was a decision made to accommodate London's growth within its boundaries. The only way you can realistically do that is to boost density and obviously there are arguments around sustainability

Newham planning officer 1.

As we saw in the literature review, Downs (2005) argued that sustainability policies might increase conflict between tiers of government as they tended to require the taking of policy decisions from the local to the regional or national level. This was not evident through our case studies which might be partly explained by the fact that the hierarchical nature of the planning system both creates the potential for, and helps resolve, conflict over claims and counter claims for density. While some local

politicians and members of the public may seek to challenge some of the claims (causing a potential conflict for local planners), planners are able to fall back on the hierarchical-legal nature of the planning system in order to avoid the complexity of challenging inherited higher tier policy; put simply, they can warn local politicians (members) that any attempt to challenge fundamentally higher tier policy is most likely to end in failure. If nothing else, planners' appreciation of the legal construction of the planning system is likely to make them support – or at least not bother to contest – 'inherited' policy on density and other matters. Where claims from the discourse of conviction are tiered down to them, planners are able to assert that these are a given too. The hierarchy of planning can create complexity as planners find themselves at the interface of conviction claims passed down from above and the realities of delivering on the ground. However, in practice, the hierarchy offers the potential to simplify as local planners can simply cast themselves as the deliverers of national and regional policy. And even though planners find themselves at the interface between conviction and pragmatism, this might not only be because they are between receiving conviction claims from above and the reality of delivering on the ground. Local planners may hold, or be owners of conviction claims just as much as they are receivers of them.

Any reliance on the 'authority' of planning, of professional identification with conviction claims might be expected to bring planners into conflict with locally elected officials who are answerable to their electorate. There was, however, little evidence of this in the course of the interviews. Some planners did engage on an individual/professional level with the claims for density that was seen to set them apart from locally elected members (local politicians):

…a lot of [planners] would have strong views around sustainable development and would see high density as being a useful tool in trying to encourage sustainable development. I don't think local members hold those views at all actually. Their concerns would be that too dense a development might lead to potential social problems that not enough car parking is provided for those developments…

Barking & Dagenham planning officer 2.

We might expect a professional cadre of planners delivering national and regional policy to have consistently to confront the more conservative views of local politicians and the public. Our survey respondents lent only weak support to this view. When asked if higher density development is more popular with planners than local members nine of 17 agreed/strongly agreed, six were neutral and only two disagreed. Neither did the interviews suggest a set of planners inculcated into a sustainability (including density) discourse that was consistently at odds with those of elected

officials. There was no such clear division with members sometimes described as pro-density, typically because of the potential to develop much needed housing in London. However, member support was highly contextual, even within boroughs, depending on individual visions of how boroughs should develop. This is well illustrated by the case of Croydon where members representing the core 'edge city' clearly had different views of appropriate development from those elsewhere in the borough.

> *I'd say local members are elected so they're keen to please their electorate. I'd say views on this vary considerably throughout the borough in terms of the outlying wards and the central wards. The councillors within the central wards are, you know, very positive about high density development generally when it's got officer support that it's met all the other criteria.*

Croydon planning officer 1.

Across the four boroughs officers described differing levels of support for schemes sometimes strongly supported by members at other times resisted. Several officers noted an emerging caution about new schemes as the pre 2008 development boom was seen to have led to a number of schemes of questionable quality with members becoming sensitive about the political fallout (see a London example from Mace 2013). Where opposition was encountered from local members, the planners we interviewed were clear that they were part of a broader national and, in particular, regional discourse that required higher density development; that is, they resorted to the defence of the planning hierarchy. However, it does not follow that the interviewees were zealots wedded to all the conviction claims for density as we will see in section six.

5.2 Coping with the complexity of density

The survey data suggests that the senior officers who responded are confident that they are aware of the trade-offs in delivering higher density development – that they are successfully managing complexity; 13 of the 17 agreed/strongly agreed that their authority was sufficiently aware of the dis-benefits that higher density development can produce and 11 of 17 agreed/strongly agreed that their authority was effective in mitigating he dis-benefits of higher density development. In the survey officers were asked which influences were most important in delivering a balance of social and economic priorities. Once again local politicians were seen as playing an important and positive role (17 out of 17 important/very important in balancing social priorities and 16 out of 17 for balancing the environmental). In both cases both the London Plan and local plans were viewed as key (16 out of 17 answering being important/very important in both cases). National and regional planning policy provides a secure hierarchy which serves to legitimate density claims. Moreover, these are combined with local planning policy and process to provide a settling or stabilising of the everyday complexity that balancing the advantages and

disadvantages of higher density brings. In the interviews, several officers described a process of policy making and testing which provided a clear foundation for the determining of planning applications. In three of our case studies at least one respondent, described how the assumed robustness of the policy development process resulted in local policy that was a fixed element that would be applied in a predictable and regular way in order to achieve appropriate decisions at the development management stage. The process described appeared logical, reasonable and straightforward. Given the substantial complexity involved and the competing pressures bearing down on officers it is understandable why they may view the process in this way as it provides a persuasive sense of surety and manageability. Officers were asked about how officers balanced the economic, social and environmental gains and losses of higher density development. Specifically they were asked about the relationship between policy documents and judgements made during plan determination. Officers referred back to the robustness of the policy making process rather than acknowledging that policy might leave these questions unanswered.

> *Yes, I think that is done when you're preparing your local development framework. I think that's when you would do that. I mean all plans have to--, you have to do a sustainability appraisal of all your policy documents and of course the purpose of a sustainability appraisal is to ensure that you do get the right balance between those three different areas, the economics, the social aspects and the environmental aspects. So really that should be done in the sustainability appraisal of the local development framework. And really I don't think when we get planning applications in, we really think about planning applications in those terms because we're assessing them against policies, which should already have been assessed in that way.*

<div align="right">Barking & Dagenham planning officer 1.</div>

Barking & Dagenham planning officer 1 refers to a Sustainability Appraisal which would have been used to evaluate the impacts of the local planning documents. This was mentioned by officers in other locations too and, again, appeared to provide certainty that the policies would be robust in terms of their sustainability and so would lead to sustainable outcomes on the ground; i.e. should not be unduly detrimental to any one of the strands of sustainability - economic, social or environmental. However, in the UK there is considerable discretion exercised at the plan determination stage and it was not clear how the faith placed in well formulated policy would be applied to the reality of determination where a process of negotiation can frequently lead to some policies being given more weight than others.

This point is reinforced by experience of the London Plan Density Matrix (reproduced at Figure four), which was identified as a key tool in terms of setting objective, appropriate, and easily measurable,

parameters for delivering higher density development. Despite the faith placed in the Density Matrix by local planners, as giving a firm reference point in a fluid and complex environment, its limitations have been recognised from early on. While it was referred to as an important tool in the process on a number of occasions as we have seen, its parameters are frequently exceeded. Officers therefore appear to rely on securing the balance of advantage and disadvantage by applying robust and tested policies yet, in practice, these policies are often, themselves, weighed one against another (Bowie 2008). A GLA commissioned review (URS/Patel Taylor 2006), which studied the application of the matrix in four London boroughs (including Tower Hamlets and Newham), found that even though, "[the] Boroughs have taken the Density Matrix as a strategic planning policy and have applied and adopted it to local circumstances" (p19), the implementation was often very flexible and ambiguous. The report notes that for example, "setting… is not often referred to explicitly and ….not geographically defined or mapped; PTAL is refereed to but…not often mapped" (p20) and that the other criteria such as car parking and housing type are not referred to in practice. Therefore, planners both turn to the Matrix for certainty yet apply it in an unclear and sometimes inconsistent manner.

Recognising the crudeness of the Density Matrix as a tool, a 2012 study (Maccreanor Lavington et al. 2012) proposed 'optimizing' density based on a wide range of factors that focused on the quality of the development rather than 'maximizing' density and proposes various design and management mechanisms to 'fit' higher density developments into different contexts. Following this, the GLA's 2012 London Housing Supplementary Planning Guidance (SPG) notes that there has been a disjuncture between the policy objectives of the matrix and its implementation at borough level, which resulted in a lack of consideration of local characteristics and inadequate attention being paid to many policy objectives. The SPG notes that among a variety of factors, attaching undue weight to the Density Matrix has resulted in some unfavourable results and therefore argued that density should be understood as an outcome of a variety of measures, "rather than a concern in its own right" (GLA 2012: p30). Therefore, the SPG states, "That is not to say that density in its own right is no longer a Mayoral concern- it is, *but only one* among a much wider range of amenity, transport and social policies to manage development in ways to secure sufficient numbers and types of home in a high quality environment while respecting local character." (GLA 2012: p30, emphasis added). Thus, even though the latest iteration of the London Plan retains the Density Matrix, it proposes that it should be used as only one among many policy objectives to optimise development on sites in different settings.

Local officers would already be well aware of the broader conviction claims for density like social mixing, reduced car ownership, proximity to work etc. The 'over-application' or excessive focus on the Density Matrix seems to reflect that, for the local planners we interviewed, it represented a fixed point of reference among the complexity of claims for density. In the context of New Public Management where great stress was laid on targets and measured outcomes the Matrix dominated because it provided a set of easily applied figures (although often exceeded). Only in one of the four cases did an officer strongly recognise the complex act of coordination required to maximise the benefits and minimise the dis-benefits of density. S/he talked at length about the need to focus less on density and particular outcomes and more on coordinating different service providers to establish at the policy formulation stage the wider policy goals, as density, as a means of goal delivery, carried with it both positive and negative attributes. S/he also discussed the iterative nature of the relationship between policy and the development management process. The latter was not simply a case of applying policy but rather there was a need in higher density applications for development management officers to work with policy and other service providers to achieve an understanding of the challenges and potential of a proposed development and then to seek to maximise the potential wins and minimise losses. More typical was for the interviewees to describe the balancing of advantages and disadvantages not as a 'live' process actively re-negotiated as part of each application but as a settled and fixed outcome of earlier policy development. This was one of the few instances where the institutional complexity of the decision making process was acknowledged and the need to foster and maintain active relationships between the many agencies involved in local governance and service delivery was highlighted.

> *But those policies are only as good as the Development Management Officers who are implementing them. And the scale of development in Tower Hamlets is such that they need to be very, very good officers, they need to make those assessments, and we have urban design conservation specialists to assist. They need to be able to make those incredibly detailed assessments, whether you were looking at a 500 unit scheme, which is 50 storeys in height, there's a lot of habitable rooms in a wider area, you need to be confident you're not going to impact on their daylight and sunlight. So there's a lot of detail to go through in rigour, you need to be strong in negotiation. A 50 storey tower may be wholly inappropriate on that other site but it could well be in a certain area a 20 storey tower may work. In other areas a relatively high density scheme could come in six, seven storeys, that might be over development on a particular site and so there's a lot of skills and experience I think in making the quality context apply and be able to have the confidence and the strength to negotiate with the developer to get the best scheme through.*
>
> Tower Hamlets planning officer 1.

6. The outcomes

While the survey data reported in 5.2 suggested that senior local planners were confident that they were aware of, and successful in, balancing the advantages and disadvantages of higher density, another question solicited a different response. The survey respondents were more neutral when asked if higher destiny development had improved the overall environment in their borough (three agreed/strongly agreed; 11 were neutral and three disagreed/strongly disagreed). The mismatch between claims for destiny and the outcomes were seen in a number of instances.

6.1 Density as delivered

We use Boyko & Cooper's (2011) six categories of claims for higher density - mobility, efficient land-use, social equity, economic benefits, aesthetic advantages and energy efficiency - in order to structure our discussion of how planners reflect on the relative success of each in practice. First mobility, after the need for more housing the next greatest driver of density for the survey respondents was the need to reduce car use (14 of 17 agreed this was important/ very important) and to increase use of public transport (15 out of 17). There was some evidence that this is not being delivered in practice. From the interviews there were twenty coded references to mobility with these being dominated by one of the outer London boroughs (Barking & Dagenham). Here the primary concern was with the increasing demands that a greater density of residents placed on parking spaces in the borough and on the need for improvements to the public transport system. This focus is unsurprising in outer London as people are likely to make diffuse inter-suburban journeys which are far harder to provide for by public transport than the more concentrated radial journeys that the 'classic' commuter might make into the city centre. London's employment spaces have a polycentric nature to them, while the centre dominates; there are multiple sites of employment across the capital and neighbouring counties. However, few of these are large single centres such as Croydon, the pattern is better described as atomised as people move from suburb to suburb to access small to medium sized work locations. There is no evidence that the new higher density residential development in places such as Barking and Dagenham is providing local work for residents so reducing the need to travel. There is a car club in the borough (typically more common in inner London) but cars are at a distance from the town square development that we were looking at. There was also some evidence of coordination between service providers, again in Barking and Dagenham an officer referred to Barking Riverside where the permission for 10,800 new homes was capped to 3,500 with the rest being conditional on the delivery of an extension to the Docklands light rail system. Nevertheless, and as with other aspects of higher density schemes, there was a reported gap between what people were encouraged to do as part of higher density living and what they did do. Despite car clubs and public transport provision and the restriction of parking supply

(both in terms of absolute spaces and through parking control zones), residents still bought and used cars and sought parking spaces.

> *The only other thing I would say is that there is a whole issue about car parking in all this and how that fits in with some of this high density thing because it doesn't--, just because you don't provide the car spaces in developments doesn't mean people don't have a car so in that sense there's something I think that we might well have thought a bit more about previously.*

Barking & Dagenham planning officer 2.

A second claim for the compact city is that it makes best use of resources including land, by curtailing greenfield development. Alongside policy linked to the efficient use of land, is the notion that compact development is efficient in terms of infrastructure provision. Higher density directs use to existing resources such as water and sewerage, existing public buildings and services and saves the need to provide this elsewhere. There was no mention of higher density increasing the efficient use of utilities infrastructure such as water and electricity. In part this may be because this argument is more pertinent at a regional or national scale where development outside existing built up areas would require extensive new provision. Moreover, in a London context, most of the infrastructure needed is largely already 'in the ground' and with provision made via the private sector, our planners may have been less likely to consider these benefits specifically. Finally, whilst water provision in London is problematic, its supply is again via private companies and its efficient use is mediated through building regulations, a system that sits outside planning in the UK.

Where the link between density and resources did provoke a response was in relation to the requirement for further publicly supplied resources. This was especially emotive when school places were discussed. The provision of larger flats was seen as important for families with children, especially in areas with higher ethnic minority populations. However, these flats also implied the need for additional school places, which are currently undersupplied across London. In addition, our planners commented that there was often an unexpected occupation of one and two bedroom flats by families with children, which led to an even greater demand for school places than anticipated, leading us to reflect on the often unexpected ways in which people occupy and use property. As we've seen with the Barking and Dagenham case, planners can use Section 106 agreements to restrict new development until a service is in place (e.g. the extension of the Docklands light rail). This serves as leverage on regional and central government who clearly want to see housing delivered but may be slow at providing other infrastructure. However, school provision is calculated through a periodic review of actual school pupil rolls and is non anticipatory. Planners can seek Section 106 funding from developers to bridge the gap between new children moving onto

developments and into local schools, but there is no guarantee of the number of pupils that a development will yield and, where families unexpectedly occupy small flats there can be a considerable under calculation. Here a developer would be unlikely to agree to a contribution when building one and two bed units. Therefore, for our cases, the limits of government funding and developer contributions both made higher density development appear as a short to mid-term drain on resources rather than a means to maximise it.

> *Our experience is that large numbers of people bring children and then you get into that whole issue about well where's the infrastructure for those children. So there's a whole social infrastructure argument as well tied back into this and then that has to be balanced against those other things that I think we talked about in terms of the benefits.*
>
> Barking & Dagenham planning officer 2.

In addition, interviewees reported the challenge of achieving cooperation from other public bodies, (private bodies can also be very hard to work with but they were less likely to make demands on the authority at a later date for resources). These are often the result of common coordination problems or silo structures, where different service providers have separate lines of accountability, policy deliverables, and timetables and are often undergoing almost perennial reorganisation (a chronic problem for the health service in England).

> *[…]we will consult [transport, health, education] and we'll get nothing, we will meet and we'll get no detail, or little detail. And then further down the line after the plans are set, "Oh, this is what we want and we want to do this," and then we'll have to react to it.*
>
> Newham planning officer 1.

And even where coordination between public providers has been has achieved the required outcomes may be resisted by the private sector as an additional cost:

> *I still think we're probably the first council in the country to allocate secondary schools on private development sites. […] as you can imagine the developers, at the examination in public, fought like anything not to have the allocations on their site.*
>
> Tower Hamlets planning officer 1.

The broad issue of supplying sufficient infrastructure in a timely manner was also picked up in our survey. When asked about the challenges arising from the delivery of higher destiny the most

important was rated as insufficient social infrastructure (Doctors, school places etc.), 15 of 17 responded that they agreed/strongly agreed and two were neutral; no-one disagreed.

A third claim for higher density development, social equity and diversity, in effect, responds directly to England's suburban tradition. Whereas the lower density suburbs were seen as driven by and leading to social division on a class and tenure basis, it was proposed that higher density and mixed tenure development could overcome this. Broader claims, based in Putnam's (1995) concept of bridging social capital and the idea of 'mixed communities' posited that greater social interaction between individuals of varying social classes would in turn create more vibrant successful communities with lower levels of worklessness, poverty and social exclusion (See Lupton & Tunstall, 2008 for a review). Many of these gains were to be made via the provision of affordable and market housing together in new developments where the mixing of tenures was to be encouraged. Whilst these claims have been extensively critiqued from a variety of perspectives (Cheshire, 2006; Lupton & Fuller, 2009), our purpose here is to merely report it as a claim for higher density and to reflect on the evidence gained in our case studies. Beyond one comment from a planning officer in Tower Hamlets who thought that the influx of new residents (especially homeowners) had been positive for the borough, there was little to suggest that social mixing was being achieved. In reality, our interviewees would have little or no way of knowing this as the day-to-day management of housing estates falls to building managers, concierges and Registered Social Landlords. The most common reference made by our planning officers to any social benefit, was that higher density allowed for a greater quantum of new housing and that this therefore met housing need.

In the literature, a possible downside of higher density is a socio-psychological one; a lack of wellbeing because of some cultural/social disinclination for density and/or high-rise. Some of our interviewees did raise similar concerns although relatively few times (coded in 12 places). As one officer noted, the presence of density could be taken as the appearance of crowding. In one sense this could be an accurate perception as greater density may mean more people and so more competition for resources in the area – more people trying to access the local GP or dentist. However, one of the challenges of density is that we simply do not know, and cannot control, how units are occupied. As we have noted, planners reported being wrong-footed by families occupying smaller units. Equally, a higher density of units need not mean a higher density of population; lots of units occupied by single people may generate fewer people in an area than housing occupied by large numbers of people.

It's things like crowded, places being crowded, density can often be confused with things like over occupation 'cause you can have things like high density but it may not be--, let's say, the units might actually be quite spacious within that, it may not be crowded at all.

Newham planning officer 1.

Another psychological aspect was that of choice; as one interviewee noted a basic difference between private market and social tenants was that while private tenants were more likely choosing to live in higher density properties, social/affordable tenants were likely to have had less, if any, choice. Both the style of the housing and the nature of the area generated by the presence of higher density housing may have positive buy-in from some, representing more modern housing, a certain vibrancy and urban aesthetic. However, differences in social and cultural capital may mean that for some social housing tenants higher density, in particular high-rise may simply reference past failed social housing experiments that incorporated high-rise living and so the necessary compromises such as reduced parking may not be compensated for by positive associations with modern urban form.

The fourth set of claims is economic. Insofar as new higher density development is able to widen social capital by drawing private market tenants into areas previously dominated by social housing it also has the potential to improve spending power in an area as the new groups are likely to have greater income. The economic benefits are the fourth claim for density. Economic benefits could also include a transfer of social capital and people becoming more work ready; these have already been considered. Our interviewees discussed economic benefits in terms of an increase in spending power in an area. Here there was only a muted belief that this was happening. In Newham the view was that it had a positive affect but one that was hard to measure, this was reflected in Tower Hamlets. In the suburban boroughs there seemed to be a degree of path dependency at play. Croydon officers were positive in their assessment of the impacts, but the new residents were moving into an edge city with a history of high levels of employment and a dense built form in the town centre. In this sense, new residents were acting as agents of regeneration bringing back lost vibrancy to a large employment and residential centre. Barking and Dagenham roots lie in a working class industrial past, unlike Croydon's service centre economy. As a broadly poorer borough than Croydon it appears to have struggled to bring in residents with spending power to revitalise the local economy. Rather, the story here is one of poorer and relatively more affordable areas being more open to ethnic minority in-migration and/or economically marginal renters.

Would bring in people with money in their pocket that they spend locally. What the reality of what happened was there's a lot of buy to let in it so ironically then there's a lot of people with not very much money.

<div align="right">Barking & Dagenham planning officer 2.</div>

Another example of economic development was the seemingly 'de rigueur' requirement that developments contain commercial uses at ground floor level. These units were reported as often hard to let and far from enlivening the streetscape led to dead space at street level. In part, the interviewees felt that it was because of the difficulty of achieving a sufficient quantum of new people to support new retail – especially given changing shopping patterns.

The fifth claim is one of aesthetics, as reported by Boyko & Cooper (2011), these are related to questions of urban design, that of the inclusion of green space and aesthetic benefits both in terms of how buildings and also the wider area is designed (physical advantages). We do not deal with these in detail here as there was limited reference to them; that higher density might deliver aesthetic qualities including to open space. Only in Barking and Dagenham did officers refer to 'biodiversity' where they referred to gains delivered alongside the provision of new higher density housing. These included the planting of rare species trees, siting bat boxes on new buildings and also the provision of green roofs on buildings (where there are not accessible to residents they can provide a habitat for bugs).

A sixth and final claim is for the energy advantages of higher density living. As noted already in relation to water usage, the environmental performance of buildings is mainly regulated by building regulation legislation, which operates separately from planning. However, planning can require performance standards in excess of building regulations where there is an evidence-based case to support the exception. Planners can add conditions to a permission requiring developers to monitor the performance of buildings, although this is the exception rather than the rule. However, in Tower Hamlets the planning officer indicated that the council is active in post permission evaluation. In terms of our own, albeit limited, evidence on building performance, we found that building managers made a number of negative observations about high profile green energy schemes in buildings, in particular combined heat and power systems and solar energy panels. It was evident that these were often failing and were either redundant early in the life of the building or required substantial payments from residents to repair or replace them. The problem, as reported, was that systems were either of poor quality or were inadequate for the task when installed.

6.2 Reflecting on practice

In this section we consider how planners reflect on the experience of having delivered higher density housing. A simple assumption would have been to expect planners to be ready adopters of discourses of conviction, engaging with these as part of their core professional identity as deliverers of a more sustainable future (Jepson, 2001, 2004). As we saw in section 6.1, planners appear more engaged with discourses of pragmatism rather than of those of conviction, but to the extent that this is the case how do they manage the expectations raised by discourses of conviction and how, as pragmatists, do they then learn from their day-to-day encounters with density? These questions are the focus of this final sub-section. Whatever their original intentions and motivations, the planners we interviewed were fairly sanguine in their assessment of the likely benefits of density when weighed against the various claimed benefits. They recognised that density was delivering housing numbers and that it appeared to be maximising the use of available land in their respective boroughs. But there was clearly a considerable gap between the claims for density and what planners felt was being delivered.

One feature not yet mentioned, was the considerable influence of the market in pushing for higher densities in the run up to 2008 and the subsequent economic downturn, which has severely reduced rather than halted development in London. Economic drivers were noted in all four study-areas. The general signals regarding the acceptability of higher densities and the need to maximise housing numbers, plus an absence, until recently, of minimum space standards all combined to encourage developers to bid more for land in the belief that high returns would be possible through higher densities. In reflecting on what had been built, a number of the planners indicated that the market had probably pushed members and planners to approve development that now appeared less than optimal. In the survey, when asked what was driving higher density in their authority the greatest influence was seen as the development industry (17 of 17 agree/strongly agree); although closely followed by regional policy (16 of 17 agree/strongly agree). These are not necessarily so different, as the 2004 London Plan was argued by Thornley et al. (2005) to have been strongly influenced by private sector interests. There was a strong sense that the planners we interviewed had been on a journey following the post-millennial policy turn that favoured higher density but which ran parallel with a burgeoning land and property market.

> But I think there was then too much focus on trying to cram as much development as possible on those brownfield sites. And I think since 2008, when we had the credit crunch; I think we've sort of backtracked from that virtually. We've got examples now of sites in this borough were previously, you know, developers were trying to extract higher and higher densities
>
> Barking & Dagenham planning officer 1.

The combination of a policy turn to higher density and an extended period of speculative development in London was commented on in all four local authorities and all thought that the private sector had been able to push densities to inappropriate levels and without providing wider gains in a 'hot' property market. However, more constrained times had provided space for reflecting and the view was also expressed that many lessons had been learned.

> *I think the quality of homes has improved significantly. I think maybe in the mid 2000s, at the peak, I think there are arguably some schemes, which aren't of the highest quality. Now the schemes that are completing are--, I think are absolutely fantastic, I could reel off ten names of schemes that have been put forward for housing design awards. I say ten names of schemes, ten high profile, big flagship schemes. But a lot of the smaller schemes are much higher quality than maybe they would have been ten, 20 years ago. So I think for design quality we've really upped our game.*

Tower Hamlets planning officer 1.

Arguably, the ability of planners to reflect on the market push for density has a teleological quality to it, a belief that present knowledge and reflection will lead to better outcomes in the future. Planners were once only experienced only at delivering lower density housing, had made mistakes and learnt lessons with higher density and now had acquired the requisite knowledge. This might be tested when land and property markets pick up again and developers are once again incentivised to push to maximise rather than optimise density on any given plot. Notwithstanding this reservation, all of the interviewees demonstrated considerable reflexivity on what had been delivered in the boom period.

A number of officers stressed that they were not focused on density as a discrete element when evaluating any particular scheme, as density was simply one element amongst many in need of consideration. If other factors (e.g massing, quality of internal space, access, external space, etc) were deemed not to have worked out, then this might indicate a problem with the density. However, other elements, especially those related to design were as likely to be the key criteria for judging success or failure. The focus on massing and design reflect 'success criteria' to which planners have ready access as it's relatively easy to judge the physical appearance of a development once it's been built. There was limited evidence of planners accessing the experience of either building managers is a valuable yet under-utilised resource. We acknowledge that this is not necessarily an easy resource to exploit as it can be time consuming and therefore costly to gather information and this evidence can be hard to interpret. The same is true of the residents' experience of the building. However, emerging academic work focused on the residents' experience, it raises pertinent and sometimes uncomfortable issues for professionals seeking to deliver a successful

higher density environment. Dempsey (2012) indicates that residents' assessment of success and failure might vary from that of the planners. She finds, for example, a negative correlation between density and sociability and a reduced sense of security. Similarly, Allen and Blandy (2004) suggest that for many, life in higher density accommodation may simply be seen as a temporary phenomenon linked to life-stage. There are indications that the demands of higher density living (sometimes being nearer to noisy uses such as bars, and a lack of car-parking spaces) may lead people to seek lower density living once they can afford to and especially when managing dual jobs and children make car use a greater priority in order to manage household time (Jarvis et al 2001). Such work, therefore, provides a micro-view on the specificities of a particular development only some of which will translate to more general lessons.

Although our officer interviewees referred to individual experience and judgement calls supplementing formal policy, it was not clear how their assessments of improved practice might be tested, and if accurate, captured and communicated to others. Some referred to formal processes for capturing data about outputs. All authorities have to produce an annual monitoring report which sets out statistical data on housing delivery; number of units, proportion delivered on brownfield land and so forth. Some concern was expressed that the present coalition government was reducing the requirements of this and that the result might be less quantitative monitoring on the part of some authorities. Of course, the absence of government requirement need not prevent data gathering but it does make it a harder resource for planners to justify. Tower Hamlets reported a process that went beyond the statutory requirements and that also sought to capture qualitative elements in order to learn from what had been developed, but even this was design focused.

…we look at something called the Building for Life Assessment and we go and review all of the buildings that have been completed within that year, and we use that as a basis to see how we're doing and compare it year on, year on. [it's] quite good because that is a more rigorous assessment of design quality and I think that's a bit harder to pick up from statistics alone […] it's a good tool for being able to get a more rounded view of the successful developments.

Tower Hamlets planning officer 1.

As we saw in section 5.2, the London Plan Density Matrix was viewed in technical reports as producing unintended consequences only two years after its introduction. While it had always been intended that it should be used as one tool alongside the many other policies in the original London Plan of 2004, it soon became evident that it was used too much in isolation from the other policies

that sought to balance the gains and loses of density. While some may have interpreted this as a failure on the part of local planners, they themselves were aware of the limitations of density.

…density I think is in many ways a blunt tool. It gives you broad guidance but the thing that matters most is the standards of accommodation and the design, the actual physical external appearance of the building and how it relates to its surroundings, its settings, surroundings.

Newham planning officer 1.

7. Conclusion – delivering quality in higher density development

We are delivering higher density housing in the UK including a marked move from building houses to flats (especially in London). Our core interest has been how this has been managed, especially as some of the influential conviction claims suggest that density produces simple wins while the pragmatists point to considerably greater complexity. It is important to ask about the outcome of the planning of higher density housing because the built forms that people occupy might not tell us so much about the places they would chose to live in. Any reference to choice in housing must be tempered. What housing people chose to consume may only be a weak reflection of what they want to consume. As noted in relation to the suburbs in the US (Beauregard 2006) and the UK (Jackson 1973), people moved to suburban areas because it simply made sense in economic terms. Oftentimes the economic logic was subsidised by state investment in, and spending on infrastructure and tax breaks that helped the suburbs to 'stack up' economically over the city. However, this does not mean that the suburbs were not popular (Clapson 2003). In a similar way, in the UK today, the turn to higher density living may reflect a preference for this new urban form and its concomitant advantages; but equally, it may be that people are living at higher density because they have no other choice within the constraints of budget and location.

We have categorised the literature on density in order to reflect better the tendency to position taking on the issue. Discourses of conviction and of suspicion are informed by higher arguments about the relationship between the market and planning, to what extent should we intervene in markets or allow markets to determine the built environment. Clearly, these are passionate and recurrent questions and so the debate on density is 'heated' by these bigger questions. Although we have acknowledged these more fundamental questions we have focused on something rather different and more pragmatic; our work looks at the experience of delivering higher density housing. In many respects our approach is reflective of our third category of literature; we have sought a pragmatic understanding of, rather than a principled case for or against, higher density housing.

Local planners are of particular interest because they stand at the interface between 'high' level conviction claims for density and the pragmatic realities of delivering schemes on the ground. Under New Labour the move to density was accompanied by conviction claims that density would deliver the triple bottom line of sustainability; that is, environmental, social and economic gains. Alongside the triple win claims for sustainability more general and multiple changes in the institutional structure of local government produced enormous complexity for planners who had to coordinate government demands for a new planning culture, with a focus both on efficiency (meeting targets) and effectiveness (delivering an ever-widening set of outcomes including the win-win claims for density). Moreover, in London local planners, along with elected officials, had to work through an emerging relationship between the new Mayor of London and the London Plan and local plan making and determination. These changes were bedding down at the same time as a very hot property market in London made huge demands on planners. Part of the complexity that informed the case study schemes was, therefore, an intense speculative pressure on the part of the private sector alongside an emerging institutional environment.

As a series of developments have now been built and occupied under these conditions we wanted to know how planners had managed this period of complexity. While London has been relatively less affected by the post 2007 crash than much of the country many higher destiny schemes in more peripheral parts of the Capital are on hold, providing a period of relative calm in which to reflect. Have the claims for density been delivered within or lost to this complexity. In practice we see that planners engage primarily with a few key benefits of density, in particular that it delivers more housing which in turn provides the social benefit of more social/affordable housing; they are more circumspect regarding the wider win-win claims of density. We could interpret this rather negatively for the profession, that in a hierarchical planning system, local planners simply had to make the most of the hand they were dealt. It might be that planners simply responded to measureable targets and focused on these because that was what mattered in terms of their own accountability. We did see that local planners sought in some cases to reduce the complexity of competing demands when determining applications by relying on the robustness of certain 'givens'. Local planners considered The London Plan Density Matrix and local policies to be proven tools to assist in decision-making and therefore decisions taken based on these would be robust. Although, in reality, the matrix or a particular numerically based policy would only produce robust outcomes if weighed against the requirements of other policies that accompanied it.

On a more positive note, there was ample evidence of local planners being highly engaged in an on-going reflexive practice, both formally and informally, quantitatively and qualitatively. As well as a

broader reflexivity on the quality of the built form planners also evidenced an awareness of how development was being occupied. For example, how families with children occupied housing developed for smaller households or how people sought to maintain car use in the new environment. Although planners may have been led by accounting, the number of units built, at what density on what proportion of brownfield land, they were also indicating an awareness of the experience of living in these new places. Density does not necessarily, of itself, produce optimal occupation; people live in over-crowded conditions unable to access or afford adequate space. People still want to drive, because as part of a household they have to manage complex lives in terms of the time-space demands of the city (Jarvis et al 2001). While we have focused on the complexity of the decision making environment that planners find themselves in, it would also be useful to engage further with the complexity of how people actually live in higher density developments. Together with residents and building managers, local planners represent an invaluable resource for appraising the outcome of density.

The coalition government, in the cause of localism and challenging top down government, has removed the requirement on local authorities to produce annual reports on the outcomes of local planning. Even if we take the intentions at face value as positive, a key lesson from our research is that there is much valuable learning that could be achieved by capturing and feeding up the hierarchy the experience of delivering higher density development at the local level. Moreover, local politicians were generally regarded as positive force in seeking to optimise the outcomes of density; they too represent a potentially valuable pool of experience. It remains unclear how local experience and lessons might be transmitted in to future delivery as there are no fixed mechanisms for individual reflections and borough assessments to be fed back up and incorporated within the planning hierarchy; so allowing hierarchical conviction claims to go unchallenged. If we are to move towards optimising density, seeking to balance effectively the benefits and dis-benefits, we need to acknowledge further its limitations as well as its possibilities. One way of achieving this would be to develop a more robust, counter-hierarchic learning mechanism that gives far greater voice both to the consumers of higher density housing (both residents and building managers) and, also, to local planners and politicians engaged with the quotidian reality of determining planning applications for such development.

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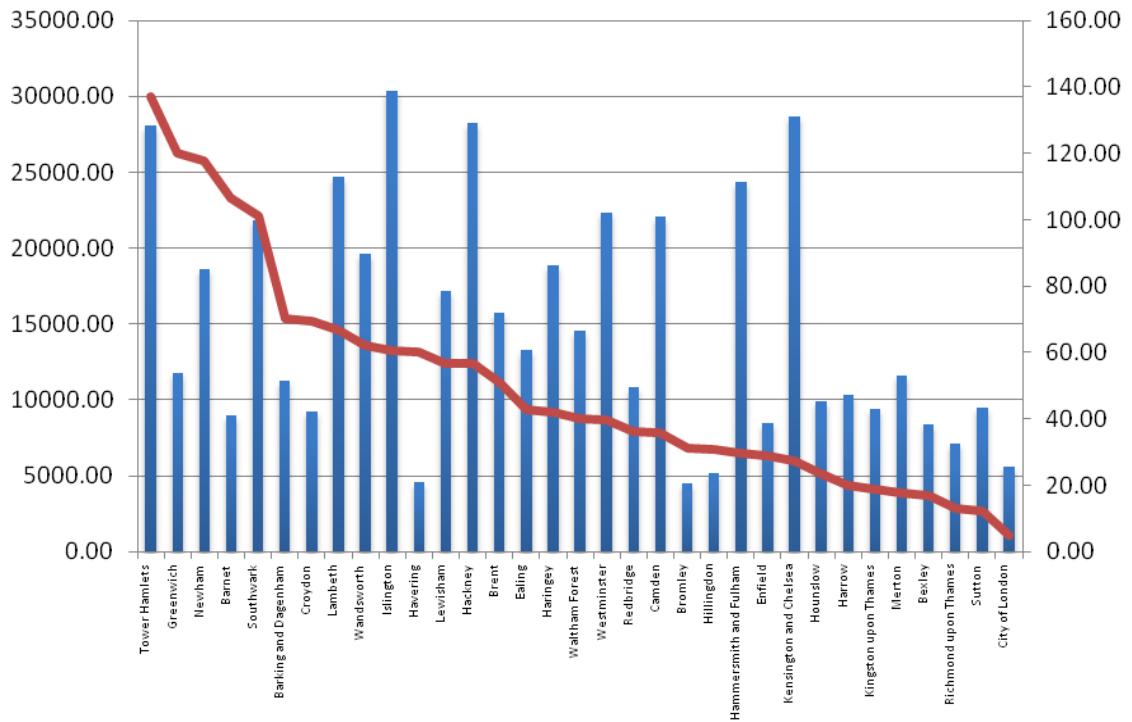
Figure one: Population density per hectare of London Boroughs 2011 (blue bars/right axis) and 10 year minimum housing targets 2006-16 (red line/left axis.
Source: Population density GLA 2011 GAL [online]
http://data.london.gov.uk/visualisations/atlas/borough-profiles/atlas.html [accessed 04/10/2013].

Figure two: Indicative location of the four case studies within Greater London.
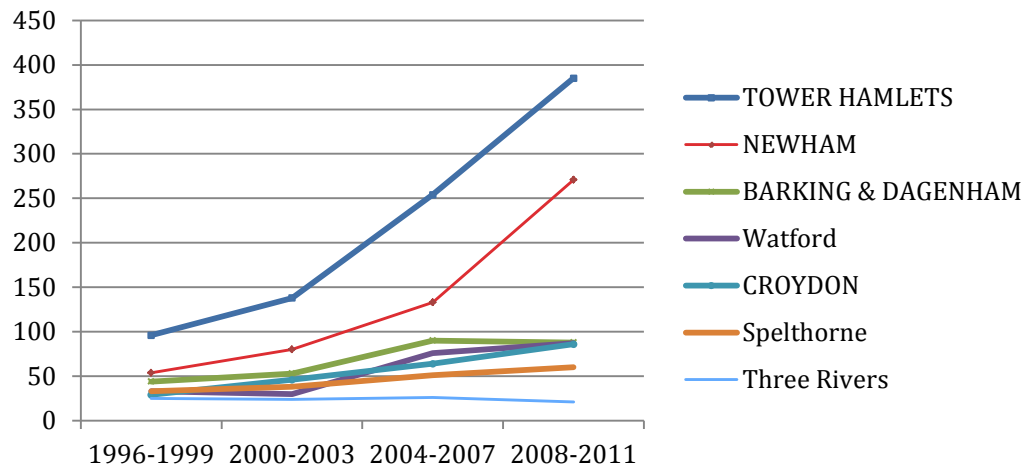
Source: base map, OpenStreetMap.

Figure three: Change in dwellings per hectare 1996-2011, four case-study areas and three representative districts (high-medium-low change) neighbouring London.
Source: Live tables on land use change statistics. Organisation: Department for Communities and Local Government. Table P232: Land use change: density.
[Online]https://www.gov.uk/government/statistical-data-sets/live-tables-on-land-use-change-statistics [accessed 01.05.2014].

Density location and parking matrix (habitable rooms and dwellings per hectare)

			High	Moderate	Low
		Car parking provision	2 – 1.5 spaces per unit	1.5 – 1 space per unit	Less than 1 space per unit
		Predominant housing type	Detached and linked houses	Terraced houses & flats	Mostly flats
Location	**Accessibility Index**	**Setting**			
Sites within 10 mins walking distance of a town centre	6 to 4	Central			650 – 1100 hr/ha 240 – 435 u/ha Ave. 2.7hr/u
		Urban		200 – 450 hr/ha 55 – 175 u/ha Ave. 3.1hr/u	450 – 700 hr/ha 165 – 275 u/ha Ave. 3.0hr/u
		Suburban		200 – 300 hr/ha 50 – 110 u/ha Ave. 3.7hr/u	250 – 350 hr/ha 80 – 120 u/ha Ave. 3.0hr/u
Sites along transport corridors & sites close to a town centre	3 to 2	Urban		200 – 300 hr/ha 50 – 110 u/ha Ave. 3.7hr/u	300 – 450 hr/ha 100 – 150 u/ha Ave. 3.0hr/u
		Suburban	150 – 200 hr/ha 30 – 65 u/ha Ave. 4.4hr/u	200 – 250hr/ha 50 – 80 u/ha Ave. 3.8hr/u	
Currently remote sites	2 to 1	Suburban	150 – 200 hr/ha 30 – 50 u/ha Ave. 4.6hr/u		

source   GLA

Tower Hamlets 926u/ha PTAL 5

Newham 513u/ha PTAL 5

Barking & D. 423u/ha PTAL 6b

Croydon 399u/ha PTAL 4

Figure four: Original London Plan Density Matrix, 2004, with case study developments overlaid.
Source: GLA London Plan.

Figure five: Barking Town Square development

ORIGINAL FILES FOR ALL IMAGES AVAILABLE

Figure six: Croydon development
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AVAILABLE

Figure seven: Newham development.
ORIGINAL FILES FOR ALL IMAGES AVAILABLE

Figure eight: Tower Hamlets development
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