# Part 3: Towards an Urban Renaissance: sustainability, inclusion, and social mixing

## Chapter 8 The rebirth of high-rise living in London: towards a sustainable and liveable urban form

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> 'When I was first told I was going to live in a high-rise block I thought I was going to have a heart attack' (Interview, Corrine, Edrich House, 2005)

### The rebirth of the residential high-rise in London

The residential high-rise has seen something of a renaissance in London of late amidst renewed interest in its potential for delivering a more sustainable form of urban living. Though eye-catching 'blow-downs' of system-built tower blocks still continue from time to time across London (Kerr, 2003; see Figure 1), for the first time in a generation, residential high-rises are being built. The return of the residential high-rise to London has been driven, in no small part, by Mayor Ken Livingstone (see McNeill, 2002a and Charney, 2007, on Ken Livingstone and tall buildings). Drawing on the Urban Task Force report (DETR, 1999), Livingstone and his advisors believe that an increased density of new housing on a single footprint will contribute to environmental sustainability by increasing energy efficiency and public transit use, and – when combined with mixed use and mixed tenure developments – will also contribute to the social regeneration of inner-city sites. In the absence of many taxation or regulatory powers, the mayor has sought to drive London's regeneration forward by exploiting his authority over planning and development control (McNeill 2002b). By the time the London Plan was formally approved in 2004, Livingstone and his officers were not simply promoting, but indeed actively pushing, local boroughs to accept high-rise residential buildings as one of the centrepieces of London's 'sustainable' brownfield regeneration policy.

INSERT FIGURE 1 ABOUT HERE

This policy turn dovetails with increasing commercial and architectural interest in building residential high-rises. In London's super-charged residential property market, there is now considerable demand for high-end high-rises, especially in areas near the City of London. Poverty-stricken Inner London boroughs are cashing in on their proximity to the Square Mile by selling off undesirable council tower blocks to private developers as the recent BBC1 documentary *The Tower* charts. This documentary focuses on the sale, by the cash strapped Lewisham Council, of a council tower block - Aragon Tower - on the Pepys Estate in Deptford to the private developer Berkeley Homes. Berkeley Homes has regenerated the high-rise and added five extra floors of penthouse flats on the top, making it, at least for the moment, the tallest privately owned residential tower block in London. Their market is young professionals, whom Lewisham Council hope will regenerate the area. Aiming squarely at that market, a number of iconic designer towers have been built and more than forty are now being planned across London, including the London Bridge Tower – popularly known as the 'shard of glass' – which will, at 66 storeys, be the tallest building in Europe and provide a mix of office, retail, hotel and residential accommodation, advertised as 'first class sky high living' (see

www.londonbridgetower.com). At the same time, other, more publically minded, architects and social housing providers are also looking with renewed interest at the residential high-rise. There are a number of 'sustainable' proposals already on 'drawing boards', such as Marks Barfield's Skyhouse (see Figure 2; also www.marksbarfield.com/skyhouse) and Bill Dunster's 35 storey SkyZED flower tower (see www.zedfactory.com/flowertower), aimed at meeting the demand for key worker housing, though none have yet come to fruition.

INSERT FIGURE 2 ABOUT HERE

This reversal in fortunes for the residential high-rise has provoked something of a popular backlash. For instance proposals by St George's Plc to build a 49 storey tower at Vauxhall were initially rejected by Lambeth Council in the face of stiff local opposition, and only given planning permission when the mayor intervened to override the local decision (GLA, 2003a). With London's skyline reaching ever higher, the House of Commons Select Committee on Urban Affairs (2002) conducted a public inquiry into Tall Buildings. Many of those submitting memoranda to it rejected the Urban Task Force's (DETR 1999: 60) celebration of high-rise living as utopian elitism out of touch both with English heritage and with the legacy of alienation, social exclusion, and anti-social behaviour left by the 1960s Tower Block 'experiment'.

Such conceptions of the high-rise, however, are not backed up by much systematic research into the actual experience of high rise living in London or the UK more generally. Almost all of the research to date has focused on council tower block tenants and public housing estates (Jephcott and Robinson, 1971; Saegert, 1976; Coleman 1985; Power 1997; Towers 2000; Green et al, 2002; Jacobs 2006), rather than on the rising number of inner London purpose built flat dwellers in other tenures. Thus Towers (2000: xiv) notes, 'the experience of multi-story living has been little studied, and largely subsumed within the broader question of the 'future of "council estates"'.

In this chapter, we address that research gap through empirical exploration of the contemporary experience of high-rise living in London. Drawing on a questionnaire survey of, and interviews with, a representative sample of high-rise residents across all tenures in Inner London[1], conducted as part of a larger ESRC-ODPM funded project[2], we seek to draw out the major factors influencing residents' perceptions of the liveability and sustainability of London's high-rises. Such knowledge is key to regenerating existing high-rise social housing (see Chapter 15 on the regeneration of the King's Cross Ten Estates) and ensuring that the new generation of high-rises sprouting up along the riverside (see Chapter 9 on London's new-build riverside renaissance), and elsewhere in London, are liveable, sustainable, and successful components in the regeneration of their local areas.

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[1] For the purposes of this study, Inner London was defined as the 14 boroughs of The City of London, Westminster, Tower Hamlets, Camden, Southwark, Islington, Lambeth, Hackney, Wandsworth, Haringey, Hammersmith and Fulham, Lewisham, Kensington and Chelsea, and Newham.

[2] ESRC-ODPM 2003-2006 'High Rise Living in London: Towards an Urban Renaissance'. Loretta Lees designed the project, applied to the ESRC-ODPM scheme for funding, and was the primary academic supervisor on the project. Richard Baxter was the PhD student awarded the project. Sarah Fielder the ODPM supervisor on the project. And Donald McNeill the second academic supervisor.

**The research project**

The research focused on 45 residential high-rises, across all tenures, selected randomly out of 340 such buildings in Inner London. The random sampling procedure used means that the study is based on a representative sample. There were four stages involved in the sampling, the first being the creation of the sample frame. Three software programmes, Cities Revealed Building Class, Ordinance Survey (OS) Mastermap and ArcView GIS were utilised. Cities Revealed Building Class is a GIS ready dataset that classifies all residential buildings by type. It has 32 classifications including 2 high-rise categories, buildings 6 stories and above and 10 stories and above. We focused on those 10 stories and above. OS Mastermap is a comprehensive GIS dataset that is compatible with Cities Revealed Building Class and, importantly, contains postal address data. ArcView GIS is a utility that allows GIS datasets to be displayed on screen spatially and, importantly, manipulated. Cities Revealed Building Class and OS Mastermap were merged in ArcView and the sample frame was then created by locating all the high-rises in the 12 Inner London boroughs using ArcView's search function. The second stage concerned the decision over how many high-rises should be in the final sample. Overall, there were 340 high-rises in the sample frame of the 12 Inner London boroughs. Given a limited research budget yet also a requirement to be representative we decided to include 45 of these high rises in the final sample. The third stage involved the random sampling of these 45 high-rises. The sample frame was stratified into four geographical areas or quadrants - North East, South East, North West, and South West. Importantly, this ensured that the final sample was distributed across Inner London, rather than being concentrated in one or two geographical areas. The number of high-rises that needed to be in each quadrant was then calculated. For example, the North East segment had 80 high-rises out of a total of 340, or 28% of the total number of high-rises in Inner London. It was, therefore, allocated 13 high-rises in the final sample, which is 28% of 45. Each of these high-rises was then designated a number and a random number generator was used to create a random sequence of numbers and the first 13 numbers of this sequence were recorded. The fourth stage involved the extraction of postal address data for the 45 high-rises from OS Mastermap into ArcView. A total of 2,500 postal questionnaires were then sent to the residents of the 45 high-rises in the sample. Although response rates were low (17.5%), there were 459 responses in total with at least 10 responses for each building except for two, which were subsequently dropped from the research. As well as basic demographic and tenure information, the 8 page survey asked residents a number of open and closed questions about their neighbours and neighbourhood, the cleanliness, safety, design, and management of their building, its sense of community, and their overall experience of high-rise living. The survey was also used to recruit 57 residents from half of the buildings to participate in a further round of qualitative research involving in-depth semi-structured interviews. These interviews brought out more fully the resident's experiences, encounters, thoughts, attitudes and emotions with regards to high-rise living. In addition 15 residents volunteered to keep photo-diaries to document their everyday experiences of high-rise living. These were written accounts of residents' experiences that included photographs. The qualitative data from the in-depth interviews and photo-diaries was triangulated against the findings of the questionnaire survey to provide a rich understanding of the diversity and specificity (cr. Jacobs, 2003) of high-rise living across Inner London.

**Using a Latourian approach to address the 'problem' of high-rise design**

In the research we sought to problematize two alternate explanations often given for the success or failure of high-rise housing. First, there is a long standing tradition of seeing social behaviour and the character and quality of social life as heavily shaped, if not altogether determined, by the design of the built environment. Whereas those opposed to the expansion of residential high-rises insist that 'vertical living has in fact resulted in … the break up of traditional communities and patterns of life' (Save Britain's Heritage, 2001), proponents often point to the Barbican as proof that these problems can be eliminated through good design and management (e.g. Church and Gale, 2000; Brown, 2003). Though their assessments of high-rise living are diametrically opposed, they agree about the power of design in determining the high-rise's success or failure. Significant in cementing this first policy narrative about the centrality of design to the quality of high-rise housing in Britain has been the work of Alice Coleman (1985). Drawing on Oscar Newman's (1972) ideas of defensible space, Coleman conducted a series of government-funded research projects on high-rise public housing estates in London during the late 1970s and early 1980s[3]. She concluded that there was a causal relationship between the particularities of the high-rise design (eg. its height, secluded internal corridors, lifts and fire-stairwells) and anti-social behaviour. Her research provided the basis for a multi-million pound programme of estate renovation to put those design flaws right (see Price Waterhouse, 1999). But the case for design determinism was unproven (Wassenberg, Turkington and van Kempen, 2004:11) and Dicken (1994:127) scolded Alice Coleman (and Oscar Newman) for 'engaging in the very type of architectural determinism which they took modernist architects to task for' (p.127).

Second, critics of Coleman and her influential brand of design-determinism have offered an alternative explanation for the social problems popularly associated with high-rise public housing estates (Hillier 1973; Spiker 1987). Reviewing the legacy of the regeneration programme Coleman inspired, Hill (1997: 13) concluded, 'The real lesson of all these interventionist remedial programmes is that some estates will fail, however they are designed if they are full of poor people, with no capacity or opportunity for making real choices about their lives'. Likewise in her study of Les Minguettes and the Broadwater Farm Estate in London, Anne Power (1997) pointed to social factors such as poverty and the concentration of socially marginal or excluded tenants in them as the underlying cause of the problems on those notorious public housing estates. In their own way such sociological explanations can often be just as determinist and mono-causal as the design determinism they challenge.

By contrast, in this research we challenge both these explanations. In so doing we go a step further than van Kempen (1994:176) who argued: 'high-rise design is neither a sufficient nor a necessary condition for the emergence of social problems on housing estates. The crucial element is the combination of design with a heterogeneous, transient and poor population'. Drawing on the Actor Network Theory (ANT) of Bruno Latour (2005), we follow Jane Jacobs (2006)[4] in questioning any absolute distinction between the social and technical in architecture and its experience. As Jacobs et al. (2007:613) explain:

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[3] Alice Coleman led the Land Use Research Unit in the Geography Department at King's College London.

[4] Drawing on Jenkins (2002) Jacobs extends Lees's (2001) call for a 'critical geography of architecture' into what she calls a 'new geography of architecture'.

> ‘Actor network theory does not simply place the categories “society” and “technology” as equal “actors” or equivalent “determiners”, but reconceives the world as an assemblage of heterogeneous “objects” that cannot, *a priori*, be categorised as technological or social.

ANT critiques the modern practice of social science for separating society from nature. Latour (1993) argues that with its focus on society and social forces social science omits nonhumans such as animals and technology from its analyses. Such a practice is related to the hegemony of humanism in social science and the commonly held conception of actors and agency in social science as involving ideas of intention and cause which animals and technology are seen not to have:

> ‘The main reason why objects had no chance to play any role before was not only due to the definition of the social used by sociologists, but also to the very definition of actors and agencies most often chosen. If action is limited a priori to what ‘intentional’, ‘meaningful’, humans do, it is hard to see how a hammer, a basket, a door closer, a cat, a rug, a mug, a list, or a tag could act’ (Latour, 2005:71).

The inclusion of non humans significantly expands the number of participants involved in social analysis. Latour (2005:71) considers the examples of a person hitting a nail with a hammer, walking in the street with clothes, and boiling water with a kettle. He argues that the nonhuman technologies, the hammer, clothes, and kettle, should be documented in any social study because these events could not have been carried out the way they were without their assistance. Nonhumans can also influence how humans behave. He uses the example of doors and their hinges (Latour, 1997) arguing that doors can cause changes in our behaviour, for example, a door that is closing quickly may force humans to move faster. Nonhumans are particularly relevant to this study because of the modernist architects, like Le Corbusier, who intended that the high-rises’ technology would influence human behaviour and shape a new society.

Jacobs (2006) writing about high-rise building ‘events’, including the collapse of Ronan Point in 1969, and Jacobs et al. (2007) writing about the Red Road high-rise estate in Glasgow, utilise ANT well but the discussions seem strangely disassociated from the high-rises under investigation. The latter article for example, tells us little about the social life of Red Road, its atmosphere, or the residents who live there. This research, therefore, seeks to extend Jacobs’ work on residential high-rises by using ANT in the context of a study that examines residents’ *lived experiences* of their buildings and surrounding neighbourhood[5]. In keeping with an ANT theoretical framework our analysis focuses on interaction and on the ways in which the quality of life and experience of London’s high-rise residents are shaped through practical and material engagements and through the interaction of factors that cannot be understood as either exclusively social or technological, but instead as hybrid assemblages of both.

Careful analysis of our survey and qualitative data has indicated four factors key to determining the quality of life experienced by high-rise residents in Inner London: 1. the material condition of the building and its maintenance, 2. its physical design and

[5] In a sense then, it merges aspects of the ‘critical geography of architecture’ (Lees, 2001) with the ‘new geographies of architecture’ (Jacobs, 2006).

security, 3. the prevalence of anti-social behaviour, and 4. residents' feelings about their neighbours and neighbourhood. Conventionally, these four factors might be said to lie along a continuum from the technical to the social. But in keeping with our ANT approach, we understand each of them as hybrid and heterogeneous assemblages of both human and nonhuman elements. But before turning to discuss those key factors in detail we provide a general characterisation, drawn from our survey, of the lived experience of high-rise living in Inner London.

**Characterising the lived experience of high-rise living in Inner London**

Contrary to the popular stereotype of the tower block as a symbol of misery and urban anomie, the majority (63.4%) of the high rise residents reported being satisfied (41.1%) or very satisfied (23.3%) with living in their high-rise. This tallies with the National Tower Block Network (1992) who found that significant numbers of the tenants in their study of tower blocks were satisfied with their homes. In response to open-ended questions they offered generally positive assessments such as, 'Lovely, everyone is very friendly and welcoming,' 'It's great,' (Anonymous authors, questionnaires, Edrich House, May 2005), 'I enjoy the peace and quiet, being high above street level and the great views,' and, 'Excellent,' (Anonymous authors, questionnaires, Landmark Heights, May 2005). Only a small minority of just over 20% reported being dissatisfied (8.6%) or very dissatisfied (11.6%) with high-rise living. It was possible to aggregate the residents' survey responses so as to give each building an overall liveability index score, which was then used to rank and classify the 43 buildings included in the study (see Figure 3).[6]

INSERT FIGURE 3 ABOUT HERE

The aggregate liveability scores ranged from 13.63 to 28.41. Since the numbers themselves are arbitrary, what is important is the range and diversity of scores. The average liveability score for the top quartile of buildings was over 150% higher than that of the bottom quartile. Though it is always possible to quibble around the edges of any classification, closer inspection of the scores suggests the buildings fall into 3 broad classes. At the top there are 8 high scoring buildings in which residents consistently report high levels of satisfaction. Although the highest scoring building in the study was, not surprisingly, Lauderdale Tower in the Barbican, where privately owned flats regularly sell for more than half a million pounds, that top grouping of buildings also included a number of local authority or Registered Social Landlord (RSL)-managed high-rises, such as Edrich House, Bowsprit Point, and Seaton Point in which, right to buy notwithstanding, 75%, 30%, and 91% of respondents respectively were council or RSL tenants. Bowsprit Point, for example, was ranked 6$^{th}$ on the liveability index. Its residents liked the newly refurbished building, the park adjacent to the high-rise, and its location near to Canary Wharf. The tenants were well behaved, they tended to know their neighbours on their floor, and the Tenants Association was quite active. The residents especially enjoyed the peace and tranquillity and the views across London offered by their building. Although there was a strong correlation in our survey data between reported levels of satisfaction and both tenure and employment status, the high levels of satisfaction offered by these buildings puts paid to simplistic sociological explanations that look to class or levels of social inclusion as the sole determinates of high-rise quality of life.

[6] For further details about the aggregation methodology, see Baxter (2005).

At the other extreme there were a small number of buildings, almost all in local authority ownership, at the bottom of the Liveability Index where residents consistently reported being dissatisfied with their building. Taplow Tower, on Camden's Chalcot Estate in Swiss Cottage, was one of the lowest ranking buildings in the study (see Figure 4). Though elderly tenants recall how it used to be different—one respondent even stated that when it first opened, there was a long waiting list to get in—it now epitomises all of the worst stereotypes about public sector tower blocks. Many of its exterior windows are broken or covered over with cardboard, its once gleaming interior is now covered in graffiti, and the lifts, when they work at all, smell of urine. As one resident reported:

> 'I am very unhappy with living in a high-rise block and the walls are very thin. I come home with the lifts unbearable or broken. The entry-phone system is always broken down, for the past 3 months it's not working and the entrance door is not closed at all… I am ashamed to ask people to visit,' (Anonymous, questionnaire, June 2005)

FIGURE 4 ABOUT HERE

However, the largest group of buildings fell somewhere between these two extremes. Although most residents in this broad middle category were basically satisfied, they were not uncritical either and many expressed specific concerns with various aspects of their buildings. Taking Columbia Point, in Docklands, as an example, 64% of the residents who responded were satisfied and 7% were very satisfied with living in their high-rise. They praised their relatively large flats whose broad windows maximized natural light and offered expansive views across London. The building was regarded as safe, with one resident commenting during interview, 'I do like living in a high-rise ... You're safe, I do feel safe in my flat, and we've got this community you see, and the park, there's always people coming through from the tube all the time' (interview, Columbia Point, July 2005), but then several minutes later they complained about the dark interior corridors and a mattress that had been left in the lobby for weeks by an indifferent management. Several other residents also complained about the management of this local authority run building, variously calling them, in open-ended responses, rude, evasive, or inept. No survey respondents reported being satisfied with the service they provided, with half neither satisfied nor dissatisfied and the rest either dissatisfied or very dissatisfied. Residents complained about the lack of proper cleaning and maintenance and the difficulties of getting the local authority to respond to problems with a building that otherwise they greatly valued. Such ambivalent experiences exemplify the varying combinations of positive and negative encounters faced by residents in high-rises in this broad middle category.

For the most part, however, academic research has tended to ignore such ordinary experiences. Instead it has focused upon trying to explain the bad or failed high-rise, frequently drawing on one of two kinds of determinism - technical (the high-rise is bad because of its design/construction) or social (the high-rise is bad because it is a sink estate for the socially marginal or because it is badly managed by an incompetent or cash strapped local authority). By contrast our research highlights the ordinary experience of high-rise living. We show this now in our discussion of the four factors

we found to be key to determining the quality of life experienced by high-rise residents in Inner London.

**1. Material condition of the building and its maintenance**

For the social scientist, the physical fabric of a building is easy to overlook, but as Jenkins (2002:229-230) notes, it is important to consider the materiality of the structure itself. The unreliability of basic services such as heat, water, and power, was a common complaint for residents of our lowest ranked buildings. For example, residents at Denning Point regularly lost their water supply because of burst water pipes in the building. There were also frequent black outs due to power surges in the old electrical wiring.

One design flaw with many early modernist high-rises was that their flat roofs and concrete panel construction were prone to leakage and moisture ingress and to damp patches on residents' interior walls:

> 'My Mum and Dad's bedroom that's where all the leak came in. It's continuously damp even in the summer… I mean my Dad, god bless him, died of chest cancer, and I mean we were living in a damp flat at the time, and at the end of the day it couldn't have done him any good. The last four weeks of his life he slept in a chair in the living room,' (Jimmy, interview, Pope House, September 2005).

Even high scoring buildings were not immune to these problems. Both Lauderdale Tower and Bowsprit Point, the first and sixth ranked high rises in Figure 3, had to undergo extensive repair programmes to rectify such structural deficiencies.

The quality of such repairs and the failures of management to carry out proper maintenance were problems consistently raised by residents of low scoring buildings. Right-to-buy leaseholders in local authority managed buildings experienced particular difficulties because of policies to separate out service provision for council tenants from that for leaseholders expected to pay their own way. Residents at Denning Point were dismayed to see Tower Hamlets spend thousands replacing the doors of council tenants, but not leaseholders, leaving the interior corridors with a garish mixture of doors in different styles and colours. More serious problems were experienced by a Tissington Court leaseholder whose bathroom flooded. Her privately contracted plumber could not stop the leak because it originated from an area of the building that could only be accessed by council employees. She complained to the neighbourhood office, but they refused to fix it because she was a leaseholder:

> '…In the end I went to the Environmental Health people, and they said this is ridiculous, they've got to think about the structural integrity of the building' (interview, Tissington Court, July 2005).

For high-rise buildings, the lift is perhaps the element of infrastructure most crucial to residents' quality of life. Architectural historian Tom Peters (1987) has argued that along with the steel frame it was the invention of the electrical elevator that made high-rises possible. In their analysis of the experience of Glasgow's first generation of high-rise residents, Jephcott and Robinson (1971) found troubles with the lifts to be among their most frequent concerns. They frequently failed, and when they worked properly waiting times were long, especially during peak periods. In our survey there was a statistically significant correlation between overall levels of satisfaction with

high-rise living and the reliability of the lifts. The centrality of the lift to high-rise living was graphically demonstrated in the diary kept for us by one elderly Tissington Court resident for whom a broken lift meant she was a virtual prisoner in her fifteenth storey flat, because of her difficulty walking up and down stairs. Older buildings had particular problems with the reliability of their lifts, not simply because of the age of the equipment itself, but also because of the difficulty of sourcing spare parts. When the lifts failed at Taplow it could take several weeks to get them running again because the parts were no longer in production and so replacement parts had to be custom made. But as this example demonstrates, the lift, like other building technologies, depends upon wider social networks, and when those networks breakdown, because of vandalism or poor maintenance, technical failure was often the result. As one Park View House resident explained:

> 'If people drop food on the floor, food gets caught on the doors. All it takes is that to stop a lift on a floor and then it's out of action. And you've got to find it and kick out the can or whatever and get it started again. It is annoying' (interview, Park View House, August 2005).

Even well maintained and technically sound lifts could become spaces of fear and loathing if in the wrong social context. One Edgecombe House resident described how after a disturbing incident in the lift, she now she preferred to walk rather than risk being trapped in the confined space of the lift with her antagonist:

> '… earlier this year I walked into the communal area of the block, the same girl appeared. She kept pressing the lift button so that I couldn't go upstairs. I decided to go up the stairs instead, and she called me a 'fucking cunt' and continued to verbally abuse me as I walked away. I find her nasty and intimidating,' (photo diary, 17th September 2005).

**2. Physical design and security**

Such distressing experiences were often indicative of wider problems with physical security in the building. Security was a persistent theme in our qualitative data. Residents of buildings with high liveability scores felt safe and secure in the buildings, while those in low liveability scoring buildings frequently did not.

The high-rise residents in the sample emphasized the importance of design and of security systems in sealing off their high-rises and filtering who enters and leaves the building. In general those managing high-rises have sought to make them more secure by introducing secure entry, concierge and closed-circuit television (Farr and Osborn, 1997). The best security systems, however, did not just involve 'security technology' like intercoms, CCTV, and secured entrance doors, but also involved other factors such as defensible spaces and a good concierge. Recent renovations at Seaton Point in Hackney, introduced all these features. There is an intermediary zone in front of the building created by steps and an access ramp that separates the entrance to the building from the street (see Figure 5). Access to the building is then through a secured entrance door, opened either with a fob key or through an audio based intercom. The entrance hall is visible from both the outside through a glass façade and from inside over a glass partition to the lift lobby, which creates another intermediary zone and allows for high surveillance of both the internal and external spaces. Within the entrance hall there is a concierge and a CCTV camera watching all visitors and

making it physically and psychologically difficult for potential intruders to enter the building.

INSERT FIGURE 5 ABOUT HERE

Most of the high-rises in the sample, however, did not have such comprehensive security. A few high-rises had a CCTV camera in the lift or lobby, but residents were often unsure whether they were actually connected. More commonly, there was a secured entrance door accessed by fob key and either audio or video based intercom systems through which residents could allow their guests to enter the building. The problem with such systems is that they are easy to by-pass. Intruders simply follow immediately behind residents or bona fide guests or call on flats through the intercom claiming to have lost their keys and asking to be let in, as one Pope House resident explained:

> 'The intercom, you have to put a tag up to it…but the kids are going to get in. Someone will come in the building and they'll all come in after, or they'll wedge things in the lock. During the week it's a bloody nuisance because they go on the stairs and leave all their rubbish, and drink, and smoke, and that,' (Lisa, interview, Pope House, June 2005).

Despite these limitations, secured entrances and intercoms were better than having no security at all, as was the case at 3 of the 21 high-rises visited where it was possible to gain entrance to the upper storeys of the building directly from the street. One resident of Tissington Court explained how difficult it had been to get the council to retrofit the building with security doors:

> 'All the tenants living in Tissington Court have in the past signed three petitions to get security doors on the entrance door, and my friend and myself wrote to our local MP Simon Hughes in 1976 requesting security doors. Thirty years later we're finally going to get them!' (photo diary, Tissington Court, 28th June 2005).

In some high-rises such Denning Point and Taplow, what appeared at first glance to be basic security proved, on closer inspection, to be defective or broken (see Figure 6). For example, residents at Taplow complained that the steel entrance door to their building was left open all the time because it was often broken and the intercom system never worked, while the shiny CCTV camera pointed at the entrance was not even connected, as could be seen plainly seen from the frayed wires dangling down from its wall mounting:

> 'It's not effective at all. It packs up quite regular because of its age. Mine rings, sometimes you push a button and it will ring three or four different floors, and there's no security as such at all. Those CCTV cameras have never worked since they were put in,' (Mr. Dobbins, interview, Taplow, September 2005).

INSERT FIGURE 6 ABOUT HERE

But again security was not simply a function of technology or design. Human factors count too. The effectiveness of concierges, for example, depended on having 'good' ones as this resident complained:

> ‘They’re there nine am to about 12 midnight, but sometimes they’re not there and you know they don’t ask you any questions, you just walk in and out. Sometimes they’re just reading and not looking, you know it’s just a token presence,’ (interview, Denning Point, September 2005).

Similarly the effectiveness of defensible space designs also depended on social context, as illustrated by the contrast between Lauderdale Tower in the Barbican, the highest ranking building in our study, and Park View House in south London. At Lauderdale Tower there was a concierge’s desk, high ceilings, and glass panels separating the interior from the exterior to allow full surveillance from passers-by. Partly as a result all Lauderdale Tower respondents (n=36) reported feeling safe (60%) or very safe (40%).

Although Park View House was also designed according to the principles of defensible space, the results there were very different. The building’s entrance was secured by two intermediary zones: a ramped walkway setting off the front door from the street, an entrance lobby with glass doors to provide visibility to and from the street, as well as an open stairwell from which residents waiting for lifts could see people on the stairs and vice versa (see Figure 7). This was a particularly unique feature that addressed one of the main indefensible spaces associated with high-rises: the enclosed stairwell. Similar defensible space designs were also apparent on the upper storeys where the arrangement of the flats relative to the lift and the landings allowed residents to survey their landings and the front doors of two other flats through their spy holes:

> ‘If someone’s trying to fiddle with your lock and trying to get into your flat they’d be conscious that three doors behind them there could be someone spying on them or people could walk out at any time… I can stand here [in the floor landing] and just keep an eye on them so that I can see who it is from here as they come round the corner. From the hallway here I can actually see what is happening over there [in the small corridor] through the glass,’ (interview, Park View House, July 2005)

INSERT FIGURE 7 ABOUT HERE

Overall, this sophisticated transition from the lifts to flats improved the intimacy of floors, the territoriality of residents, and the security of the buildings, much as defensible space theorists predicted. Nevertheless Park View House still experienced multiple difficulties with anti-social and criminal behaviour. Shared spaces were covered in urine, there was rubbish and litter everywhere, and flats and the underground car park were being used for drugs and prostitution, as the above informant explained:

> ‘Sometimes you don’t know what you’re about to step into when the lift door opens and who’s going to be there. Um…I was going out of the block quite late at night and I stepped into the lift. There was a guy smoking a pipe, a little pipe, and I realised after a while standing there that it was a crack pipe and he offered me it! No thanks. Perfectly friendly you know, but it’s a recurring problem’ (interview, Park View House, July 2005).

**3. Anti-social behaviour**

As the above comment suggests the prevalence of crime and anti-social behaviour was an important factor shaping residents' experiences of high-rise living. There was a strong statistical correlation between residents' overall levels of satisfaction and their feeling safe in the common areas. High-rises near the top of the Liveability Index were characterised by 'good' resident behaviour. Residents reported that the common areas were generally kept clean and that there was never graffiti. In interviews and open-ended survey responses, residents of highly ranked buildings made little or no reference to anti-social behaviour by other residents. By contrast, the frequency and severity of such problems was much higher in lower ranking high-rises. The occurrence of criminal behaviour, such as assaults, robbery, prostitution, and drug dealing or taking, was only mentioned by residents of Park View House, Denning Point, Wendover and Taplow, high-rises all near the bottom of our Liveability Index.

Resident anti-social behaviour is a problem for any street or neighbourhood, but it is particularly problematic for high-rises because the effects of such behaviour can be exacerbated by the high-rises' design, the close proximity of flats, and the fact all residents pass through contained shared spaces with small spatial areas. Importantly, this means that a very small proportion of problem flats can significantly impact upon the lived experience of many households that have to share those common areas with them. A good example of this is Park View House, which was disadvantaged by only two or three flats that were primarily responsible for the anti-social and criminal behaviour in the building. Had these residents not lived there, Park View House would have scored much higher on liveability:

> 'Yeah I would definitely say it's a minority of people, say about four or five people in individual flats who have, you know, an issue with the loud music and like I said the dogs. The graffiti, the weeing in the communal areas and actually vomiting… I mean certain people I can pin point and say it's x who lives at number yeah,' (interview, Park View House, July 2005)

A key factor in controlling such behaviour was the effectiveness of informal mechanisms for enforcing social norms of decency, civility, and appropriate conduct. At Edrich House, for example, one resident related how a new tenant once held a late night party with loud music, only to be bombarded the next day with complaints from neighbours. Since then she has never held another party without first clearing it with her neighbours first. The high-rise also had a strict no smoking policy, and another resident talked about how her friends used to be told off for smoking in the lifts:

> 'When I first moved in, my friends used to complain that in the lift someone told them off for smoking. But it's basically good and like you can approach someone and say you're not supposed to smoke in the lift... Everybody wants to live in this block the same way I want to live. Peacefully and with some order basically,' (interview, Edrich House, July 2005)

Such mechanisms of informal social control were much less effective at lower ranking buildings. One Taplow resident related a particularly graphic example of the breakdown of ordinary norms of polite conduct:

> ‘Now this is absolutely true. Four of us in the lift one day going down and then she couldn’t speak a word of English. She gets in the lift and she does no more than squats on the floor. She just got out of her flat opposite and then into the lift. She squats on the floor and then uses it as a toilet. We’s in the, in the, and we’re all going [pause]. We’re all in the lift, and we’re all shouting at her, and she took not a blind bit of notice,’ (interview, Taplow, August 2005).

It is not uncommon to attribute such breakdowns in social norms to a lack of social capital (e.g. Putnam 2000). In our survey residents of high-ranking buildings were much more likely to report feeling strong ties to their neighbours than those of lower ranking buildings. But just as we argued that the physical condition and security of the high-rise depends on a wider social network of actors, so too do social interactions within high-rises depend on their material context. One of the major contributors to the anti-social behaviour experienced in the very worst buildings was the breakdown of the security systems that allowed criminals and other intruders easy access to buildings. At Taplow, for example, the internal corridors and stairwells were sometimes used by rough sleepers:

> ‘Once [laughs] I opened the door. I thought I’m not walking down there it’s full of 10 people, on the stairs between 17 and 18. There are all drunken men sleeping on the floor at about 10 o’clock in the morning,’ (interview, Taplow, August 2005)

Design was also a factor in the levels of noise and disturbance from neighbours experienced by high-rise residents. One reason that the residents of Lauderdale Tower, our top-ranked high-rise, so rarely reported being disturbed by their neighbours was because of its design:

> ‘This is one of the nice things ... The design is such that on the point of each of those triangles is an escape stairwell. So no flat touches another flat, so acoustically it’s fantastic. Above and below obviously their tough because it is a concrete floor slab and there is two metres of concrete between us’ (Trent, interview, Lauderdale Tower, July 2005).

By contrast, several residents of Brinklow House and Taplow complained they could regularly hear their neighbours, or other loud noises around the building such as drilling or banging, because, as the GLA’s (2001:11) *Interim strategic planning guidance on tall buildings* warns, poorly designed flats using cheap materials are vulnerable to noise transference from elsewhere in the building. By comparison the Lauderdale Tower flats were extremely quiet not simply because its residents were more considerate of their neighbours, but also because its design made them less likely to be disturbed.

**4. Neighbourhood and community**

The final factor influencing residents’ satisfaction with high-rise living was their perceptions of their wider neighbourhood. Although the literature on what makes neighbourhoods good is limited (Parkes, Kearns, and Atkinson, 2002), residents discussed a number of aspects. One was the feeling of community:

> ‘I have nice neighbours like and this is one of the most tranquil floors. Uh it’s been very stable for a long time and we all get on they’re all nice people. We’re neighbourly I suppose. If Georgina or Jackie my other two neighbours on this floor. If they leave a little bag of rubbish out outside the front door and I’m going out of the block anyway I’ll take their rubbish down for them.,’ (interview, Park View House, July 2005)

While critics of high-rise living often depict them as soulless places of anomie, our informants often found the elevators and other common spaces to be pleasant meeting points for unscripted encounters with neighbours and friends. The diary of a Brinklow House resident contained many entries about positive encounters and conversations with neighbours in the corridors and lifts:

> ‘On my way to do food shopping I meet three neighbours who all talked… On the way out meet other tenants in block who I know to say hello to. There is a nice lot of tenants in this block,’ (photo diary, Brinklow House, September 2005)

In addition to these feelings of community, residents of successful high-rises also felt positive about its location and wider neighborhood. CABE and English Heritage (2007) argue that one of the reasons why high-rises failed was because of their poor locations. Accordingly the *London Plan* (GLA, 2004) and *Interim strategic planning guidance on tall buildings* (GLA, 2001) both recommend locating high-rises near to public transport and other amenities, such as parks. This was supported by our research and residents stated that their high-rises’ central locations were important to their overall satisfaction. For example, one of the main reasons Nicola stated she liked living at Park View House was due to the people on the nearby streets, and the adjacent park, shops, coffee shops, restaurants, and bars. She contrasted this with her previous place of residence in the Docklands, which she described as, ‘… soulless.’

Access to outside space was important for many of our informants. Some residents made good use of their balconies:

> ‘My balcony is like a small garden area, with plants and flowers… We are very lucky to have lots of wild life, mixture of birds, and on the odd occasion bats. On my balcony I’m happy to have lots of insects which come to visit my plants and sometimes a robin, black bird or once a wagtail to use my bird feeders,’ (photo diary, Brinklow House, 2005)

But many more felt access to park space was particularly important. For instance, the attractions of Brockwell Park adjacent to Park View House were mentioned by several residents of that building. Likewise, the mid-sized park near to Edrich House was also a favorite, used by residents for park activities such as walking, sitting on the benches, and playing basket ball. Every year a festival was held in the park called the Stockwell Project with fair ground stalls, food, and live music. This meant the park was not just somewhere residents could see trees and stretch their legs, but also a social place to encounter other people in the neighbourhood and deepen the feeling of being part of a wider community:

> ‘The Stockwell Project where the whole of Stockwell basically come out. They have a little carnival and they have five aside football, they have a live stage, and they have classical music. They have dancing and they do it on a Saturday and Sunday every

> year. It's all to do with the people from Stockwell,' (interview, Edrich House, July 2005)

**Towards a liveable and sustainable high-rise living**

> 'Public sector high-rises include some of the most stigmatised housing in British society, yet its counterparts in the private sector, not least the modern blocks of high-density London, symbolise the most affluent urban lifestyles. Such contradictions are a constant accompaniment to the story of high-rise housing in Britain' (Turkington, 2004:147).

The rebirth of the residential high-rise in London is associated with a new era of urban regeneration, one that has turned its back on functionalist mass housing. The majority of the high-rises being constructed and indeed renovated in London today are by private developers or public/private partnerships, the public sector no-longer has the money for such endeavours (although some housing associations have undertaken this role - see Chapter 15). Wassenberg, Turkington and van Kempen (2004:271) argue that the residential high-rise 'has an important role in the high demand markets of London and the south-east', this is reinforced by the massive population pressures on an already overheated housing market which also means reduced access to owner-occupation and increased demand for social and affordable housing. As such there is demand for *both* private sector luxury high-rises and public sector high-rise housing. The luxurious high-rise blocks appearing along London's watersides and in other attractive locations have helped to create a more positive image for high-rise housing and to turn people's minds away from the legacy of the mass housing period. There is, however, a significant mismatch between the number of high-design, high-income, high-rises getting built in Inner London and the difficulties that those architects who have designed the sustainable and mixed-use Skyhouse and Flowertower have had in getting clients for their affordable high-rises for low-income people. This is something that the GLA needs to address if we are to have an equitable policy for the rebirth of the residential high-rise in London.

The research presented here provides evidence to back up ODPM's (2001) claim that if well designed and managed then the residential high-rise can make an important contribution to developing more sustainable urban environments. It also provides evidence that public sector high-rises can be as successful as privately owned high-rises but that certain elements have to be in place for this to occur. The residents of the pricey private flats in the Barbican had some of the highest levels of satisfaction, but so too did the council tenants in Edrich House. As Jacobs (2006:13) has argued: '… the residential high-rise – is always at the same time situated and specific'. The lesson from this is that it might be time now to look more seriously at the residential high-rise as the solution to London's key worker, social housing, and other sustainability problems. We found that four major factors influence the liveability of residential high-rises in Inner London: the material condition of the building and its maintenance, physical design and security, anti-social behaviour, and, neighbourhood and community. We argue that these four factors cannot be understood simply as either technical or social issues. What counts is interaction between the social and the technical and context. In this we follow Latour (2005) who is critical of 'cause' being

found in one or a small number of factors and then being used to explain - in this case the success or failure of the residential high-rise:

> '… to explain is not a mysterious cognitive feat, but a very practical world-building enterprise that consists in connecting entities with other entities, this is, in tracing a network. So ANT cannot share the philosophy of causality used in social sciences' (p.103).

Indeed, in the vein of Latour we would like to emphasise the complexity, multiplicity, and hybridity of the residential high-rise with respect to its success or failure as a liveable residential environment. The argument made here is that the success or failure of residential high-rises is due to multiple potential causes that are complex and non-linear. This is a difficult message for policy makers. The residential high-rise is a complicated socio-technical system. This is not a satisfactory answer but that is the reality. The challenge now is to develop a more detailed understanding of these empirical relationships and to communicate this complexity to policy makers.

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**References**

BAXTER,R. (2005) *The residential high-rise in London: towards an urban renaissance,* ESRC/ODPM Postgraduate Research Programme, Working Paper 18.

BROWN, P (2003) 'Lofty solutions to housing crisis—architects propose 200 m towers' *The Guardian* 11 February.

CABE and English Heritage, (2007) *Guidance on Tall Buildings, Consultation Draft*, January.

CHARNEY,I. (2007) The politics of design: architecture, tall buildings and the skyline of central London, *Area*, 39:2:195-205.

CHURCH, C. AND GALE, T. (2000) *Streets in the Sky—Towards Improving the Quality of Life in Tower Blocks in the UK* (Birmingham National Sustainable Tower Blocks Initiative)

COLEMAN, A. (1985) *Utopia on Trial: vision and reality in planned housing*. London: Hilary Shipman.

DEPARTMENT OF ENVIRONMENT, TRANSPORT AND THE REGIONS (1999) *Towards an Urban Renaissance: Final Report of the Urban Task Force* UK (www.detr.gov.uk).

DICKEN,P. (1994) Modernity, alienation and environment: some aspects of housing tenure, design and social identity, in in Danermark,B. and Elander,I. (eds) *Social rented housing in Europe: policy, tenure and design*, Delft University Press.

FARR,J. AND OSBORN,S. (1997) *High Hopes: concierge, controlled entry and similar schemes for high-rise blocks*, London, HMSO.

GLA (GREATER LONDON AUTHORITY) (2003a) 'Vauxhall Tower, Effra Site', Planning Report PDU/0434B/01, 8 October.

GLA (GREATER LONDON AUTHORITY) (2003b) *Interim strategic planning guidance on tall buildings*, London: Greater London Authority.

GLA (GREATER LONDON AUTHORITY) (2004) *The London Plan: Spatial Development Strategy for Greater London.* London: Greater London Authority.

GREEN, G., GILBERSON, J. and M. GRIMSLEY (2002) Fear of crime and health in residential tower blocks: a case study in Liverpool UK, *European Journal of Public Health*, 12, pp. 10-15.

HILL, S. (1997) A Roll of the Dice, *Roof*, July/August, pp. 12.

HILLIER, B. (1986) City of Alice's Dreams, *The Architects Journal*, 9(July), pp. 39-41.

HOUSE OF COMMONS SELECT COMMITTEE ON URBAN AFFAIRS, (2002) *Tall Buildings.* Transport, Local government and the Regions Committee, Sixteenth Report of Session 2001-2. London: the Stationary Office.

JACOBS,J. (2006) A geography of big things, *Cultural Geographies*, 13: 1-27.

JACOBS, J. (2003) The global domestic, in N. ALSAYYAD (Eds.) *The End of Tradition?*, Routledge: London and New York.

JACOBS,J., CAIRNS, S. and STREBEL, I. (2007) 'A tall storey …but, a Fact Just the Same': the Red Road high-rise as a black box, *Urban Studies*, 44;3:609-629.

JENKINS, L. (2002) 11, Rue due Conservatoire and the permeability of buildings, *Space and Culture*, 5;3:222-236.

JEPHCOTT,P. and ROBINSON,H. (1971) *Homes in high flats: some of the human problems involved in high flats*, Oliver and Boyd: Edinburgh.

KERR, J. (2003) 'Blowdown: the rise and fall of London's tower blocks', in J.Kerr and A.Gibson (eds), *London from Punk to Blair.* London: Reaktion. 188-197.

LATOUR,B. (2005) *Reassembling the social: an introduction to actor-network-theory*, Oxford University Press: Oxford.

LATOUR,B. (1997) Where are the missing masses? The sociology of a few mundane artefacts, in W. Bijker and J. Law (eds.), *Shaping Technology/Building Society: studies in sociotechnical change*, Cambridge, Massachusetts: The MIT Press, pp. 225-258.

LATOUR,B. (1993) *We Have Never Been Modern*, Hemel Hempstead: Harvester Wheatsheaf.

LEES,L. (2001) Towards a Critical Geography of Architecture: the case of an ersatz colosseum, *Ecumene: A Journal of Cultural Geographies*, 8 (1): 51-86.

MCNEILL, D. (2002a) 'The mayor and the world city skyline: London's tall buildings debate', *International Planning Studies*, 7, pp. 325-334.

MCNEILL, D. (2002b) 'Livingstone's London: Left politics and the world city', *Regional Studies*, 36, pp. 75-80.

NATIONAL TOWER BLOCKS NETWORK (1992) *National Tower Blocks Directory*, Canning, Community Links.

NEWMAN, O. (1972) *Defensible Space: crime prevention through urban design*. New York: Macmillan.

ODPM (Office of the Deputy Prime Minister) (2000/01) *Report on the 2000/01 Survey of English Housing*, table A9.3

ODPM (Office of the Deputy Prime Minister) (2001) *Better Places to Live by Design: A Companion Guide to PPG3* (London: ODPM)

PARKES,A., KEARNS,A. AND ATKINSON,R. (2002) What makes people dissatisfied with their neighbourhoods? *Urban Studies*, 39:3:2413-2438.

PETERS, T. F. (1987) The rise of the skyscraper from the ashes of Chicago *American Heritage: Invention and Technology Magazine* 3 (Fall): 14-22.

POWER, A. (1997) *Estates on the Edge: the Social Consequences of Mass Housing in Northern Europe.* New York: MacMillan.

PRICE WATERHOUSE (1999) *An evaluation of DICE (Design Improvement Controlled Experiment) Schemes*, commissioned by ODPM.

PUTNAM, R. (2000) ***Bowling Alone: The Collapse and Revival of American Community*** New York: Simon and Schuster, 2000

SAEGERT, S. (1976) Stress-inducing and stress-reducing qualities of environment, in: W. ITTLESON and L. RULIN (EDS) *Environmental Psychology,* pp. 218-223. New York: Holt.

SAVE BRITAIN'S HERITAGE (2001) Memorandum to the Tall Buildings Inquiry of the House of Commons Select Committee on Urban Affairs, (2002) Tall Buildings, December 2001. Last accessed 24 August 2007 from: http://www.parliament.the-stationery-office.co.uk/pa/cm200102/cmselect/cmtlgr/482/48206.htm

SPIKER, P. (1987) 'Poverty and depressed estates: a critique of Utopia on Trial', *Housing Studies*, 2 (4): 283-292.

TOWERS, G. (2000) *Shelter is Not Enough*. Bristol: Policy Press.

TURKINGTON,R. (2004) High-rise as a doubtful guest, in TURKINGTON,R., VAN KEMPEN,R. AND WASSENBERG,F. (EDS) High-rise Housing in Europe: current trends and future prospects, Delft University Press, Netherlands, pp.147-165.

VAN KEMPEN,R.(1994) High-rise living, in Danermark,B. and Elander,I. (eds) Social rented housing in Europe: policy, tenure and design, Delft University Press.

WASSENBERG,F., TURKINGTON,R. AND VAN KEMPEN,R. (2004) High-rise housing estates in Europe, in TURKINGTON,R., VAN KEMPEN,R. AND WASSENBERG,F. (EDS) High-rise Housing in Europe: current trends and future prospects, Delft University Press, Netherlands, pp.1-14.

WASSENBERG,F., TURKINGTON,R. AND VAN KEMPEN,R. (2004) Prospects for high-rise housing estates, in TURKINGTON,R., VAN KEMPEN,R. AND WASSENBERG,F. (EDS) High-rise Housing in Europe: current trends and future prospects, Delft University Press, Netherlands, pp.265-280.

**Figure 1** Tower blocks Antrim House and Cavan House, were dramatically demolished by controlled explosion on
Sunday 20 January 2002. The former council blocks are to be replaced with new low rise homes by Old Ford Housing Association and Tower Hamlets Housing Action Trust.
http://www.towerhamlets.gov.uk/data/housing/data/housing-choice/downloads/oh-06.pdf

**Figure 2 Marks Barfield's Skyhouse**

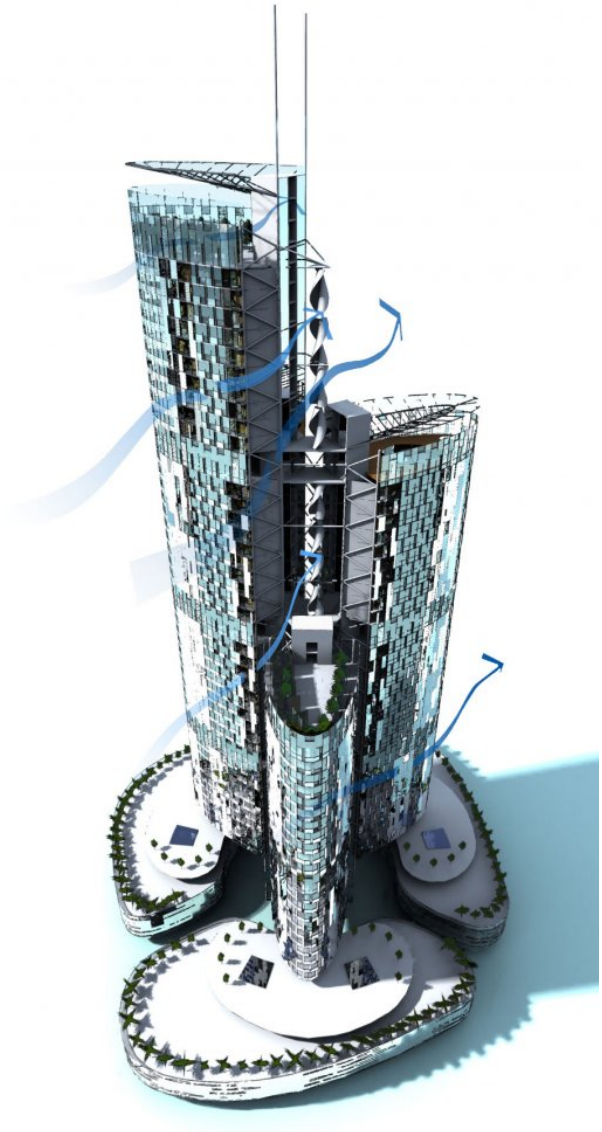

**Figure 3 Liveability Index for the high-rises studied**

| Rank | High-Rise | Liveability Score | % in class |
|---|---|---|---|
| 1 | Lauderdale Tower | 28.41 | |
| 2 | Horizon Building | 27.34 | |
| 3 | Edrich House | 26.98 | |
| 4 | Landmark Heights | 25.88 | 19% |
| 5 | Osprey Heights | 25.65 | |
| 6 | Bowsprit Point | 24.96 | |
| 7 | William Harvey House | 24.91 | |
| 8 | Totteridge House | 24.8 | |
| 9 | Blair Court | 23.98 | |
| 10 | Seaton Point | 23.86 | |
| 11 | Bacton | 23.64 | |
| 12 | Oatfield House | 23.1 | |
| 13 | Stangate | 22.49 | |
| 14 | Brinklow House | 22.49 | |
| 15 | Tatchbury House | 22.39 | |
| 16 | Rundell Tower | 21.9 | |
| 17 | Snowman House | 21.88 | |
| 18 | Angrave Court | 21.71 | |
| 19 | Wayman Court | 21.05 | |
| 20 | Farnborough House | 20.67 | |
| 21 | Penge House | 20.65 | 60% |
| 22 | Clinger Court | 20.34 | |
| 23 | Bannerman House | 20.31 | |
| 24 | Pope House | 20.29 | |
| 25 | Bedford House | 20.03 | |
| 26 | Edgecombe House | 20.02 | |
| 27 | Barton House | 19.8 | |
| 28 | Park View House | 19.73 | |
| 29 | Columbia Point | 19.6 | |
| 30 | Castlemaine | 19.56 | |
| 31 | Kelson House | 19.02 | |
| 32 | Granville Court | 18.8 | |
| 33 | Denning Point | 18.6 | |
| 34 | Stanway Court | 18.38 | |
| 35 | Overton House | 17.68 | |
| 36 | Kenley | 17.34 | |
| 37 | Babington Court | 17.13 | |
| 38 | Taplow | 17.01 | 21% |
| 39 | Brawne House | 16.65 | |
| 40 | Charles House | 15.56 | |
| 41 | Tissington Court | 14.58 | |
| 42 | Wendover | 14.58 | |
| 43 | Chillingford House | 13.63 | |

**Figure 4 Taplow, Swiss Cottage**

**Figure 5 The first intermediary zone at Seaton Point (also notice the glass)**

**Figure 6 Taplow appears to be secure from a distance**

**Figure 7 The stairs at Park View House are in the lift lobby and open**