

Design Matters in Affordable Housing

Create Streets is a non-partisan social enterprise and independent research institute focusing on the built environment. We conduct research into associations between different types of building and popularity, wellbeing, long term economic value and density. We also help public bodies, communities, developers and landowners put our research findings into practical application.

This note is about the importance of design in housing, and particularly in relation to affordable and social housing. Our recent book, *Heart in the Right Street*, examined some elements of wellbeing and street type. This was the most comprehensive up to date summary of academic and statistically robust correlations between elements of built form & measurable wellbeing. The second part of the study was a multiple regression analysis of the urban form and demographic indicator datasets against the wellbeing and health indicators. It has featured in *The Economist*, *The FT* and *The Evening Standard*.

Its findings were numerous and striking. Ultimately they come down to this: **design matters**. This note sets out a few of the ways in which our research has shown this:

Greenery.

- At least ten studies have now shown a link between regularly looking out at an attractive green environment and mood, stress, recovery from mental fatigue and wellbeing¹.
- Most strikingly patients who look out at an attractive environment require less medication and recover more quickly than those who do not. A study by Roger Ulrich showed patients assigned to rooms with windows looking out on a natural scene had shorter postoperative hospital stays, received fewer negative evaluative comments in nurses' notes, and took fewer potent analgesics than 23 matched patients in similar rooms with windows facing a brick building wall²
- However greenery needs to be done in the right way. It can be expensive to maintain and therefore susceptible to budget changes in the future. There is evidence that green space is degrading into hard paving for reasons of economy in the UK right now.³
- Likewise green space that is too big and too far away tends to not make a difference to people's everyday life. UK focus group research by MORI also shows that, given the choice, most people would rather have access to modest private gardens which they can use effortlessly every day and which seem to work better in managing family stress and wellbeing. ⁴
- What is key therefore to capture the wellbeing benefits and avoid the disadvantages of poor urban design, is to have frequent green spaces inter-weaved into the city either as private gardens, communal gardens or well-overlooked public spaces between blocks and where people really need them and frequent them.

Homes & Height.

- People want to live in homes rather than tower blocks. A recent IPSOS Mori Poll, has shown that "Terraced houses (24%) and low-rise purpose built flats (21%) are thought by the public to be the most suitable buildings to meet the needs of Londoners. Only 8% support towers.

¹ For a more extensive discussion of the evidence linking greenery and mental wellbeing see, Kuo, F., Sullivan, W. (2001), 'Environment and Crime in the Inner City: does Vegetation reduce crime?', *Environment and Behavior*, p.347.

² Ulrich, R (1984), 'View through a window may influence recovery from surgery', *Science*, 224, p.420. This is a brilliant piece of research which carefully chose 23 pairs of patients controlling for their condition, lifestyle and even nurse so that their windows remained the main variable.

³ Jones, M. (2012) High density housing – the impact on tenants.

⁴ RIBA (2012), *The way we live now*, p. 49, p. 52.

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- There are very good reasons for this preference. There are numerous wellbeing indicators associated with homes and buildings at human scale height and form. The most comprehensive literature review we have been able to find concluded that;

*'the literature suggests that high-rises are less satisfactory than other housing forms for most people, that they are not optimal for children, that social relations are more impersonal and helping behaviour is less than in other housing forms, that crime and fear of crime are greater, and that they may independently account for some suicides.'*⁵

- This is not to say that towers are always bad. Indeed, consistently around 10% of the population prefer them. But they tend to be far more popular amongst the rich and the childless. The rich can certainly cope with their higher management costs. Andy von Bradsky, the former chairman of PRP Architects, has concluded that 'it is inevitable that tall buildings have much higher management costs.'⁶ This seems to be particularly the case as high rise buildings age. Service charges in the Barbican Centre's Shakespeare Tower are now £8,000 a year.⁷ It is much easier for more prosperous residents to pay these charges.
- Clearly people can be happy in towers and miserable in houses and *vice versa* but in our analysis of a total of at least 85 peer-reviewed academic studies which contrasted socio-economically comparable groups living in high and low-rise accommodation, 67 (or 79%) found that high rise residence was negatively associated with some aspect of wellbeing.⁸
- Living in high rise building is associated with higher levels of stress and mental depression (particularly for women in families), is normally inimical to effective child-rearing and seems to be normally associated with lower levels of social capital.⁹
- This goes hand in hand with density. Developments should be dense enough to be walkable and to provide walkable shops and offices. But not too dense as to be overwhelming or to be creating problems of urban form or long term maintenance costs. Between 50 and 220 homes per hectare is perfect.

Connectivity and streets.

- The type of streets that we build is very important. Streets that 'plug into' the surrounding city are associated with numerous positive wellbeing outcomes. A well connected, highly walkable, traditional street grid of differing natures and sizes with multiple junctions and route choices. Some streets should be pedestrian or bicycle only but most would be mixed use with generous pavements wherever possible.
- If larger residential buildings really are felt to be essential existing research indicates that for most people inside and outside the building the best thing is to design them *as if they were smaller buildings*. If their external facades are 'broken up' vertically they will promote more pro-social behaviour among passers by. In one study pedestrians in front of an active façade were nearly five times more likely to offer assistance to a lost tourist than at an inactive façade site. Of those who helped, seven times as many at the active site offered to let the tourist use their phone (7% versus 1%). Four times as many offered to actually lead the- tourist to their destination (4% vs 1%).¹⁰

⁵ Gifford, R. (2007), 'The Consequence of living in High-Rise Buildings', *Architectural Science Review*, vol. 50. p. 1.

⁶ Speaking at launch of *Superdensity the Sequel* on 22 May 2015.

⁷ HTA, Levitt Bernstein, Pollard Thomas Edwards, PRP, (2015), *Superdensity the sequel*, p. 38.

⁸ Boys Smith N. (2016), *Heart in the Right Street*, p.28.

⁹ For just one example see Saegart, S. (1982) 'Environments and children's mental health: resident density and low income children' in Braum, A. & Singer, J. *Handbook of Psychology and Health*, pp. 247-271. Or see Gittus E. (1977), *Flats, families and the under-fives*, p.11, p.81.

¹⁰ Edible Urbanism Project, *Happy Seattle*, <http://thehappycity.com/wp-content/uploads/2015/03/Editable-Urbanism-Report.pdf> In addition to these findings, people at the active façade reported a significantly higher level of trust in strangers (5.1 vs. 4.8 out of 10), walked more slowly and lingered more.

- Our research has found the optimum form is for clear fronts and backs with very clear internal private or communal gardens. These gardens should be *inside* blocks. Well managed but safe communal gardens can be positively associated with high levels of neighbourliness, activity and community awareness.¹¹
- Deck access should be avoided.¹² Various studies strongly suggest that a large number of unpredictable, unavoidable and unwanted encounters with large numbers of strangers are stressful to most of us and lead to higher levels of stress, conflicts with neighbours and a sense of loss of control.
- Active Facades help makes cities work: a Copenhagen Study calculated that there was around seven times as much activity on front of active facades as the passive¹³. Activity brings all sorts of wellbeing, economic and crime-reducing benefits. Other studies in Madrid, Melbourne and Stockholm had similar findings.¹⁴ Mixed use developments, with residential, commercial and retail use, helps to bring about this crucial activity
- Walkability is vital: Studies have shown that residents of the most walkable neighbourhoods (ones which plug into city-wide connectivity) were nearly two and a half times more likely to get sufficient physical activity than residents of the least walkable.¹⁵ In a London with rising levels of obesity, air pollution, and congestion getting more people walking is vital. These levels tend to be higher in more deprived communities, and thus the importance of improving these factors in social and affordable housing becomes even greater.

Beauty and design.

- Beauty really does matter – any development that most people don't aesthetically like is missing a key trick and is not maximizing the wellbeing or happiness of residents. Environmental psychologists have shown that alongside green space and soft edges we enjoy gentle surprises and pleasant memories.¹⁶ We dislike sharp edges, darkness, sudden loud noises.¹⁷ What this means is that the strong preferences that most of us show for a more locationally and historically-referenced architecture is therefore psychologically credible, even sensible.
- There is measurable emotional attachment to beautiful places – a 2011 US survey found stronger correlations between a place's physical beauty and people's satisfaction with their communities than any other attributes.¹⁸ A 2008-2010 Gallup survey of 43,000 people in 26 cities agreed. It found that residents' ratings of the aesthetic attraction of their cities and green spaces correlated significantly with residents' attachment to their city. This in turn correlated with GDP growth. In this survey, aesthetic attraction to their city came third in the pecking order, and ranked above education, basic services or safety.¹⁹ A third study has also found that a perception of beauty is significantly associated with community satisfaction and significantly more important than individual demographic characteristics.²⁰

¹¹ Andersson, J. (2015), 'Living in a communal garden' associated with well-being while reducing urban sprawl by 40%: a mixed-methods cross-sectional study, *Public Health*, July 2015,

¹² S, Blanchard M, Prince M, Burton E, Erens B, & Sproston, K. (2002). 'Mental Health and the Built Environment: Cross-sectional Survey of Individual and Contextual Risk Factors for Depression', *British Journal of Psychiatry*, 180, pp. 428-433.

¹³ Gehl J., (2010), *Cities for People*, p.75.

¹⁴ Gehl, J. (2006), 'Close encounters with buildings', *Urban Design International*, no.1, pp. 29-47.

¹⁵ Frank L, et al (2005), 'Linking objectively measured physical activity with objectively measured urban form: findings from SMARTRAQ', *American Journal of Preventative Medicine* 28 (2S2), pp.117-125.

¹⁶ Walker, R, Skowronski, J., Thompson, C. (2003), 'Life is Pleasant – and Memory helps to keep it that way!', *Review of General Psychology*, 7, No2, pp.203-10.

¹⁷ Kahneman, D. (2009), *Well-Being: the foundations of hedonic psychology*. Montgomery, C. (2013), *Happy City*, p.30.

¹⁸ Leyden, K. et al (2011), 'Understanding the Pursuit of Happiness in Ten Major Cities', *Urban Affairs Review*, vol. 47, pp.861-888.

¹⁹ Soul of the Community Project, (2010), *Soul of the Community 2010 Overall Findings*, p.9. Available at <http://knightfoundation.org/sotc/overall-findings/>

²⁰ Florida R et al, (2011), 'Beautiful places: the role of perceived aesthetic satisfaction in community satisfaction', *Regional Studies*, pp. 33-48. Florida R., (2008), *Who's your city*, p. 163-5, pp. 314-5.

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- All of this contributes to a sense of beauty: In one important recent British project, researchers at the University of Warwick have taken advantage of the power of crowd-sourcing to gauge 1.5 million ratings of the 'scenicness' (sic) of 212,000 pictures. These findings were then compared to self-reported health from the 2011 census. Importantly they found that the 'differences in reports of health can be better explained by the 'scenicness' of the local environment than by measurements of greenspace.'²¹
- A Strong sense of place, that the development 'couldn't be anywhere' also really matters. This will normally (though not always) include either a style or use of materials that at least references a place's history. A report from the Prince's Foundation found that a desire to respect historic form, style, and materials had 84% support in participant interviews, and was the second biggest priority with 85% support in workshop discussions about what interviewees most wanted from development.²²

All these attributes come together as a structure of human scale attractive plots, blocks and streets that clearly define the public and private realm and permit residents to express themselves both as individuals and as members of the wider community. They bring huge wellbeing and social benefits, and as the head of the Cabinet Office Behavioural Insight Unit, David Halpern has pointed out, help to create 'a place which residents identify with and can think of as 'their' block, street, or development.'²³ This is something that must not be forgotten when solving London's housing crisis. With, we believe, more and more affordable or PRS units being built as small flats within large blocks our concern is that this lesson is being partly forgotten.

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²¹ Seresinhe, C. I. *et al.* (2015) 'Quantifying the Impact of Scenic Environments on Health'. *Sci. Rep.* **5**, 16899; doi: 10.1038/srep16899.

²² Prince's Foundation (2014) *Housing Communities: What People Want* pp. 9-10

²³ Halpern, D. *et al* (2015), *Promoting Positive Outcomes: How the physical and social environment can affect behaviour in Hillington Square*, p.20.