

# BUILDING HOMES GROWING COMMUNITIES

Adrian Harvey



New Local Government Network (NLGN) is an independent think tank that seeks to transform public services, revitalise local political leadership and empower local communities. NLGN is publishing this report as part of its programme of research and innovative policy projects, which we hope will be of use to policy makers and practitioners. The views expressed are however those of the authors and not necessarily those of NLGN.

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Any mistakes or omissions are, of course, my own.

**Adrian Harvey**

NLGN

# FOREWORD

**At Essex County Council we are passionate about making a positive contribution to the lives of Essex residents and businesses. It is what we exist for.**

The quality of the places around us plays an important role in our lives. This report distils the existing evidence about the impact of the built environment on transport choices, people's health, crime reduction and the strength of local communities.

The report concludes that local government is the difference between housebuilders providing excellent, affordable and well-designed housing and what the report describes as “much worse”. The County Council has understood this for some time, which is why the ‘Essex Design Guide’, first published in 1973 and evolving ever since, continues to be such an influential document in ensuring the quality of any development in Essex.

We will take the lessons of this report to heart as we see our existing towns grow over the next twenty years. And as we embark on a groundbreaking and long-term journey with local government colleagues across Essex to facilitate the delivery of three new and unique garden communities across the north of the county, this report will provide us with a sound evidence base on which to develop our plans.

**Cllr David Finch**

**Leader, Essex County Council**

# 1 INTRODUCTION

**Housing has shot up the political agenda over the past decade. Rising prices, a widening affordability gap and historically low building rates (low even before the 2008 crash) have led a succession of governments to introduce measures to increase supply. But while government has wrestled with ways to get houses built, the kinds of housing and neighbourhoods we want to build has fallen largely from the agenda.**

The quality of the places we build matters too. Quality has implications not simply in terms of creating pleasant places for home buyers, but also in making better places for all of us. Development is often seen as a cost – in terms of congestion or loss of amenity – or else simply in economic terms, with rising land values or construction jobs. But by building better, we have an opportunity to realise a host of wider benefits that can mitigate the costs and turn a new development into an even more valuable asset.

This report examines precisely what that opportunity looks like. Drawing on a systematic review of the evidence, as well as a number of case studies of successful urban design, we set out an agenda for councils to shape new settlements in ways which can improve transport choices, promote physical and mental wellbeing, reduce crime and grow social capital.

The literature on the value of good design is extensive, but it contains much that is based on theory and assumption. While many of the claims of wider value are consistent with common sense, they are less often rigorously and robustly evaluated. In this paper we have sought to get to the heart of what the data actually shows, and have reviewed over 70 rigorously-conducted studies of the impact of urban design on social and environmental outcomes.

From this review, we have found that there is strong evidence of how the built environment can make a difference in four key domains:

- **TRANSPORT CHOICES:** higher density, compact settlements with amenities within walking distance of dwellings are likely to result in greater use of public transport and lessen car dependence.
- **MENTAL AND PHYSICAL HEALTH:** compact settlements encourage higher levels of walking and other active transport choices that have significant physical health benefits for residents of all ages, while higher levels of well-managed green space can have mental health benefits.
- **CRIME REDUCTION:** there are high levels of agreement that good design can reduce crime, but the evidence is less clear on which interventions are most effective.
- **SOCIAL COHESION:** walkable, mixed-use, green neighbourhoods generally produce higher levels of social capital than do those which are more reliant on cars.

Broadly speaking, our conclusions support what might be called the ‘urban village’ approach to development, with relatively dense, mixed communities clustered around amenities and strong public transport links to central business districts and other urban centres. These are precisely the kind of design principles that have informed successful developments in recent years, and our case studies show how these principles can be realised in different settings, in the UK and further afield.

To achieve that more often, we conclude that local authorities need to take a strong leadership role, setting a clear vision, expressed through a clear master plan, underpinned by a design code. Councils have been doing this for a long time. Essex County Council produced its highly influential *Essex Design Guide* back in 1973. Last updated in 2005, and with a further update planned for 2018, the Guide sets out precisely the kinds of design principles that the evidence suggests are key to building better places.

## 2 THE EVIDENCE

*“We shape our buildings; thereafter they shape us.”*

**Winston Churchill**

The relationship between the built environment and the wellbeing of people has been the subject of debate for centuries. Ancient and Classical debates often centred on questions of beauty and the effect of buildings and places on the soul,<sup>1</sup> but while those concerns still swirled through the debates of the Victorian era, there was an increasing focus on the extrinsic value of place – in relation to crime, efficiency and especially health. Early 19<sup>th</sup> century social reformers built new kinds of settlements to improve the spiritual and physical condition of the urban poor, and municipalities provided public parks to encourage health and reduce vice.<sup>2</sup>

In the years immediately after the First World War, much of this concern focused on residential space standards – the internal dimensions necessary for healthy and functional homes. In 1919, the first regulations to this effect were put in place for municipal housing, with the Tudor Walters Committee recommending 1055 square feet for a three-bedroom house.<sup>3</sup> The subsequent deliberations of the Parker Morris Committee considered more empirically the intricacies of family life, setting space standards in 1961 for all new housing adequate for the normal activities and domestic appliances of the day.<sup>4</sup> Although abandoned in 1980, there has been considerable interest in recent years in refreshing Parker Morris for the twenty first century. Indeed the 2010 London Plan set new space standards for development in the city<sup>5</sup> – which take better account of evidence of how lives are lived today, adding educational as well as health outcomes to the mix, and building in flexibility and adaptability.

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1 Harvey, A. & Julian, C. (2015), *A Community Right to Beauty: Giving communities the power to shape and create beautiful places, developments and spaces*, ResPublica.

2 Elborough, T. (2016), *A Walk in the Park: The Life and Times of a People's Institution*, Penguin.

3 Holmes, C. (2006), *A New Vision for Housing*, Routledge.

4 UCL (2010), *Space Standards: the benefits*, CABE.

5 Mayor of London (2016), *Housing Standards: Minor alterations to the London Plan*, GLA.



As with internal space, greater claims are being made for the extrinsic value – the economic, social and environmental benefits – of the built environment as a whole. Over and above the aesthetic value of attractive places – we know that people value beauty<sup>6</sup> – well-designed development is linked with environmental sustainability and with financial and economic value.<sup>7</sup> There is also evidence that new residential development is more acceptable to existing residents if it is well-designed,<sup>8</sup> adding administrative value to the list. In this short paper, however, we consider in detail the evidence in four key areas of benefit: **transport; health; crime; and social cohesion.**

## MORE CONNECTED PLACES

The design of neighbourhoods has significant impact on the travel choices residents make while moving within them and beyond. There is fairly clear evidence that the density, the mix of uses and the design of streets all play their part in making more sustainable transport choices.

There continues to be a great debate about what 'higher density' means, and public distrust of higher density development is often centred on the belief that it means high rise housing and too many residents, creating congestion and over-crowding. In fact, post-war high rise blocks tend to yield relatively low densities (number of dwellings per hectare), somewhere between the 25 dph of late twentieth century suburban norms and the 80 dph of Victorian terraces in Hertfordshire, and even below the urban sustainable density of 69 dph.<sup>9</sup>

But some research<sup>10</sup> has shown that areas with higher population densities are better able to sustain a wide range of amenities, services and facilities in the local area, which in turn reduces the need to travel to access them. Since more densely-populated areas are also better able to sustain efficient

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<sup>6</sup> Harvey, A. & Julian, C. (2015), [A Community Right to Beauty: Giving communities the power to shape and create beautiful places, developments and spaces](#), ResPublica.

<sup>7</sup> CABE (2007), [Paved with gold: the real value of street design](#).

<sup>8</sup> DCLG (2014), [Public attitudes to new house building: Findings from the 2013 British Social Attitudes Survey](#).

<sup>9</sup> URBED (2005), [Better Neighbourhoods: Making higher densities work](#), CABE/Corporation of London.

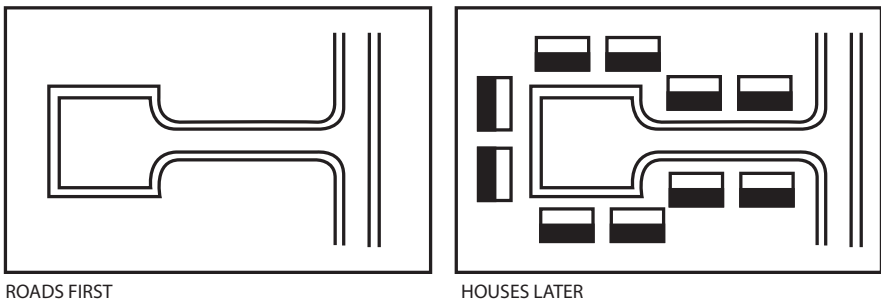
<sup>10</sup> LSE Cities (2004), [Density and Urban Neighbourhoods in London](#).

public transport, the dependence on cars is also reduced. Even in car dependent California, doubling the density of a neighbourhood was found to decrease driving per household by 25-30 per cent.<sup>11</sup>

Compact developments that mix retail and commercial land with residential areas encourage walking and cycling by decreasing the distance between trip origins and destinations: having supermarkets and other consumer services within a few hundred metres of homes encourages the use of public transport, walking and cycling.<sup>12</sup>

In order to secure the benefits offered by high density, compact developments, street networks need to be designed with pedestrians and cyclists in mind. For example, cul-de-sac layouts have long been the preferred method of controlling traffic in suburban areas, especially in the US, and are often favoured by home buyers because they provide families with a quiet street where children can play safely without the fear of fast-moving traffic.

### FIGURE 1 CUL-DE-SAC CONFIGURATION<sup>13</sup>



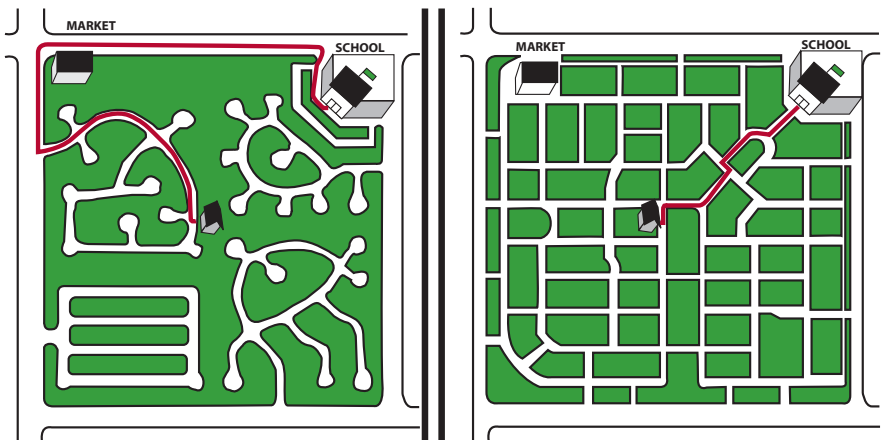
<sup>11</sup> Holtzclaw, J. (1994) *Using Residential Patterns and Transit to Decrease Auto Dependence and Costs*, San Francisco: Natural Resources Defence Council.

<sup>12</sup> Cervero, R. (1996) *Mixed Land-Uses and Commuting: Evidence from the American Housing Survey*. *Transportation Research Part A*, Vol. 30(5): 361-377.

<sup>13</sup> Department of the Environment, Transport and the Regions (DETR) (1998) *Places, Streets and Movement: A companion guide to Design Bulletin 32: Residential roads and footpaths*. London: DETR.

However, culs-de-sac have been shown to reduce mobility for pedestrians and cyclists. With so much of the street infrastructure taken up by semi-private, dead-end roads, route choices for pedestrians are minimal and inefficient, leading to long and repetitive walks. Often pavements end at the mouth of the cul-de-sac making walking at best inconvenient, at worst dangerous. During peak travel times, they funnel traffic into relatively few arterial roads, contributing to suburban gridlock.<sup>14</sup> While vehicle accidents occur at a lower rate directly on cul-de-sac streets, the surrounding main roads often have higher rates of accidents due to heavy traffic.<sup>15</sup>

**FIGURE 4** PEDESTRIAN CONNECTIVITY: CUL-DE-SAC AND GRID LAYOUTS<sup>16</sup>



<sup>14</sup> Southworth, M. and Ben-Joseph, E. (2004) [Reconsidering the Cul-de-sac](#). Access, 24: 28-33.

<sup>15</sup> Distel, M.B. (2015), [Connectivity, Sprawl, and the Cul-de-sac](#). UVM College of Arts and Sciences College Honors Theses, p.72.

<sup>16</sup> Distel, M.B. (2015), [Connectivity, Sprawl, and the Cul-de-sac](#). UVM College of Arts and Sciences College Honors Theses.

Streets and roads that are connected in a grid or deformed grid pattern are an alternative to culs-de-sac. By providing cars with more route options, connected streets spread out traffic and create safer conditions for pedestrians and cyclists. Another way they encourage walking is by providing clear, logical structures that are easily navigated. Grid-based patterns also make it easier to design efficient public transportation which can drop people off closer to their homes.

Neighbourhoods that provide safe, convenient and direct footpaths and cycle routes through and beyond the local area encourage travel by foot, bicycle or public transport.<sup>17</sup> This not only discourages car use, but also helps to create a sense of place and community in the area.<sup>18</sup>

The evidence that neighbourhoods of this kind lead to more sustainable travel behaviour is fairly robust. Unsurprisingly perhaps, residents in ‘traditional’ neighbourhoods (defined as those with higher densities, better accessibility and more pedestrian-friendly design) tend to choose more sustainable modes of travel than residents of low density neighbourhoods with pedestrian-unfriendly design.<sup>19</sup> And this has knock-on benefits in terms of lowering crime, facilitating social capital and improving health.

Key messages from the research:

- Build communities at a high enough density to support local amenities such as shops and public transport, enabling people to walk and mingle with one another.
- Reduce the need for car use by building communities near public transport links and encourage residents to use active travel methods such as walking and cycling.
- Ensure street layouts put walking and cycling at their heart, with homes that are close together and well-connected.

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<sup>17</sup> DETR (1998), [Places, Streets and Movement A companion guide to Design Bulletin 32](#)

<sup>18</sup> *Ibid.*

<sup>19</sup> Handy, S. (1996) [Methodologies for exploring the link between urban form and travel behaviour](#). *Transportation Research Part D*, Vol. 1(2): 151-165.

## HEALTHIER PLACES

There is, then, relatively strong evidence to support the relationship between compact development patterns and more active travel choices, not least walking and cycling.<sup>20</sup> A large body of medical research shows that light-to-moderate physical activity of this kind has considerable health benefits, such as reducing the risk of heart disease, stroke, type 2 diabetes, Alzheimer's disease and some cancers. According to a recent report by Ramblers and Macmillan Cancer Support, physical inactivity is responsible for 17 per cent of early deaths in the UK. They found that one in three adults in England walk less than 30 minutes per week and that 37,000 deaths could be prevented every year, if more people walked for longer.<sup>21</sup>

Day-to-day activity of this kind, as opposed to dedicated exercise or 'fitness' activity, is particularly important. On average, European adults now expend 500 fewer calories a day than they did 60 years ago, and in the UK changes in lifestyle over this period have led to reduced physical activity equivalent to running a marathon each week.<sup>22</sup> A number of studies have found that residents in more compact neighbourhoods exhibit higher rates of physical activity and the associated health benefits that goes with it;<sup>2324</sup> while another study goes further, showing not only correlation, but causation between changes in the built environment and travel behaviour.<sup>25</sup>

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<sup>20</sup> Ewing, R. (2005) [Can the Physical Environment Determine Physical Activity Levels?](#) *Exercise and Sport Sciences Reviews*, Vol. 33(2): 69-75.

<sup>21</sup> Ramblers and Macmillan Cancer Support (2013) [Walking works - summary report](#).

<sup>22</sup> Pretty, J., Griffin, M., Sellers, M., Pretty, C. (2001) [Green Exercise: Complementary Roles of Nature, Exercise and Diet in Physical and Emotional Well-Being and Implications for Public Health](#), CES Occasional Paper 2003-1, University of Essex, citing Eurodiet 2001 and NAO 2001 figures.

<sup>23</sup> Gilderbloom, J.I., Riggs, W.W. and Meares, W.L. (2015) [Does walkability matter? An examination of walkability's impact on housing values, foreclosures and crime](#), *Cities*, Vol. 42: 13-24.

<sup>24</sup> Duncan, D.T., Aldstadt, J., Whalen, J., Melly, S.J. and Gortmaker, S.L. (2011) [Validation of Walk Score® for Estimating Neighborhood Walkability: An Analysis of Four US Metropolitan Areas](#), *International Journal of Environmental Research and Public Health*, Vol. 8: 4160-4179.

<sup>25</sup> Handy, S., Cao, X. and Mokhtarian, P. (2005) [Correlation or causality between the built environment and travel behavior? Evidence from Northern California](#), *Transportation Research Part D*, Vol. 10: 427-444.

The emergence of suburban sprawl has been linked to adverse health outcomes, in the form of obesity and other chronic illnesses.<sup>26</sup> For example, a US study found that residents living in such areas were likely to weigh more, walk less, and had greater prevalence of hypertension than their counterparts in more 'compact' areas.<sup>27</sup> This correlation was consistent with the findings of a 2014 landmark study by Smart Growth America, which found that people living in 'sprawling counties' in the US had higher blood pressure, BMIs, rates of diabetes and a life expectancy of around 3 years less than their counterparts in more compact areas.<sup>28</sup>

Long distances and a lack of safe, convenient footpaths make it more difficult for children to incorporate physical activity into their daily lives, and yet early physical activity brings a number of health benefits in later life, such as reduced risk of stroke, heart disease, obesity, hypertension and osteoporosis. Children aged 4-7 living in walkable neighbourhoods with a high proportion of green space have been found to be more physically active than children elsewhere.<sup>29</sup> To get a sense of the impact of increased levels of physical activity related to neighbourhood design, consider this: it would require a weekly two-hour PE class for children who are driven to school to burn as many calories as those who walk every day.<sup>30</sup>

Encouraging older people to walk can have significant health benefits that go beyond cardio-vascular health. For example, one study found that healthy older adults living in neighbourhoods with high levels of street connectivity experienced less cognitive decline over the 2 year study period than those living in poorly connected areas.<sup>31</sup>

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<sup>26</sup> Vandegrift, D. and Yoked, T. (2004) *Obesity rates, income, and suburban sprawl: an analysis of US states*, Health Place, Vol. 10(3): 221-229.

<sup>27</sup> Ewing, R., Schmid, T., Killingsworth, R., Zlot, A. and Raudenbush, S. (2003) [Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity](#). *American Journal of Health Promotion*, Vol. 18(1): 47-57.

<sup>28</sup> Ewing, R. and Hamidi, S. (2014) [Measuring Sprawl 2014](#). Report prepared for Smart Growth America.

<sup>29</sup> Roemmich, J.N., Epstein, L.H., Raja, S. and Winiewicz, D. (2006) [Association of Access to Parks and Recreational Facilities with the Physical Activity of Young Children](#). *Preventive Medicine*, Vol. 43(6): 437-431.

<sup>30</sup> Mackett, R.L., Lucas, L., Paskins, J. and Turbin, J. (2002) [Children's car use: The implications for health and sustainability](#). Centre for Transport Studies at University College London. Paper written for a lecture given at Trinity College Dublin, Ireland, May 17, 2001.

<sup>31</sup> Watts, A., Ferdous, F., Diaz Moore, K. and Burns, J.M. (2015) [Neighborhood Integration and Connectivity Predict Cognitive Performance and Decline](#). *Gerontology and Geriatric Medicine*, Vol.1: 1-9.

In addition to the benefits to physical health, well-designed places have for a long time been strongly linked with positive mental health outcomes.<sup>32</sup> In particular, research shows that exposure to green space can contribute to emotional wellbeing, including reducing routinely-measured indicators of stress.<sup>33</sup> Several studies measured the physiological responses of participants who were asked to view natural or urban scenes after a stressful event, and found that those viewing the natural scenes recovered faster.<sup>34, 35</sup> Other studies have shown that going for a walk through a natural environment can lower levels of anxiety, negative thoughts and neural activity in the area of the brain linked to mental illness.<sup>36</sup> The amount of green space in the built environment of deprived communities has been significantly correlated with levels of self-reported stress and cortisol secretion, a hormone released in response to stress.<sup>37</sup> These findings have been corroborated by longitudinal studies that have found that moving to greener urban areas can be associated with sustained improvements in mental health conditions.<sup>38</sup>

Key messages from the research:

- Design places so that the healthy, active choice is the easy choice.
- Incorporate and encourage the use of green space in order to reduce stress and encourage exercise.
- Ensure that mechanisms to support the ongoing maintenance of an area are in place from the outset.

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<sup>32</sup> Halpern, D., (1995) *Mental Health and the Built Environment: More than bricks and mortar?* Taylor and Francis.

<sup>33</sup> Ulrich, R., Barbara, L. Fiorito, E., Miles, M. and Zelson, M. (1991) [Stress recovery during exposure to natural and urban environments](#), *Journal of Environmental Psychology*, Vol 11(3) pp.201-230.

<sup>34</sup> Ulrich, R.S., Simons, R.F., Losito, B.D., Fiorito, E., Miles, M.A. and Zelson, M. (1991) [Stress recovery during exposure to natural and urban environments](#). *Journal of Environmental Psychology*, Vol. 11(3): 201-230.

<sup>35</sup> Parsons, R., Tassinari, L.G., Ulrich, R.S., Hebl, M.R. and Grossman-Alexander, M. (1998) [The View from the Road: Implications for Stress Recovery and Immunization](#). *Journal of Environmental Psychology*, Vol. 18(2): 113-140.

<sup>36</sup> Bratman, G.N., Hamilton, J.P., Hahn, K.S., Daily, G.C. and Gross, J.J. (2015) [Nature experience reduces rumination and subgenual prefrontal cortex activation](#). *Proc. Natl. Acad. Sci. U.S.A.*, Vol. 112(28): 8567-8572.

<sup>37</sup> Ward Thompson, C., Roe, J., Aspinall, P., Mitchell, R., Clow, A. and Miller, D. (2012) [More green space is linked to less stress in deprived communities: Evidence from salivary cortisol patterns](#). *Landscape and Urban Planning*, Vol. 105(3): 221-229.

<sup>38</sup> Alcock, I., White, M.P., Wheller, B.W., Fleming, L.E. and Depledge, M.H. (2014) [Longitudinal Effects on Mental Health of Moving to Greener and Less Green Urban Areas](#). *Environmental Science and Technology*, Vol. 48(2): 1247-1255.

## SAFER PLACES

Since the 1970s, the relationship between urban design and crime has received considerable attention. This literature takes as a basic premise that the built environment can have an impact on crime levels by altering the behaviour of both the offenders and the victims. Planners can target offenders by designing the environment in a way that denies them access to potential victims – ‘target hardening’ – or by using the built environment to influence behavioural norms, either by using management and maintenance to combat the ‘broken window syndrome’<sup>39</sup> or by encouraging ‘natural surveillance’.

According to Jane Jacobs, one of the leading urbanists of the late twentieth century, high density, mixed developments are the key to a safe city because they make sure that there is a basic supply of activity and ‘eyes on the street’ to keep watch of goings-on in the neighbourhood. In theory, deserted streets are the most prone to crime, whereas homes close to bustling pavements filled with shops, restaurants and other public places are less likely to be burgled, because they are protected by informal or natural surveillance of the neighbourhood.<sup>40</sup>

There is some evidence to support the theory that mixed-use developments reduce crime, but it is fairly limited. Indeed, a number of studies have shown that, on the whole, homogenous residential environments are less prone to crime than mixed-use neighbourhoods,<sup>41, 42</sup> and properties that are close to commercial areas are more likely to be burgled.<sup>43</sup>

However, there is an important caveat to this. A number of studies have shown that higher residential densities are associated with lower per capita

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<sup>39</sup> Kelling, G. and Wilson, J (1982) *Broken Windows - The police and neighborhood safety*, The Atlantic, [March 1982 Issue](#).

<sup>40</sup> Jacobs, J. (1961) *The Death and Life of Great American Cities*. New York: Random House, p.40.

<sup>41</sup> Greenberg, S.W., Rohe, W.M. and Williams, J.R. (1982) [Safety in urban neighborhoods: A comparison of physical characteristics and informal territorial control in high and low crime neighborhoods](#). *Population and Environment*, Vol. 5(3): 141-165.

<sup>42</sup> Greenberg, S.W. and Rohe, W.M. (1984) Neighborhood Design and Crime A Test of Two Perspectives. *Journal of the American Planning Association*, Vol. 50(1): 48-61.

<sup>43</sup> Dietrick, B. (1977) The environment and burglary victimisation in a metropolitan suburb. Paper given at the *Annual Meeting of the American Society of Criminology*, Atlanta: USA.



crime rates,<sup>44, 45</sup> and it is important to differentiate between specific types of commercial uses. According to one study, commercial use "needs to be critically evaluated in terms of the nature of business, their periods of activity [and] the nature and frequency of the presence of concerned authorities".<sup>46</sup> For example, US studies have found strong correlations between street crime and the presence of alcohol outlets, such as off-licences and bars,<sup>47,48</sup> derelict sites,<sup>49</sup> social housing,<sup>50</sup> and schools.<sup>51</sup>

Yet the value of mixed-use neighbourhoods is that they bring residents out of their homes and into streets and parks, fostering a sense of community in the area by creating opportunities for neighbours to interact, which has in turn been shown to reduce crime by increasing the willingness of individuals to help and intervene on each other's behalf. A number of studies support a positive relationship between social ties and lower crime rates.<sup>52</sup>

The demarcation between public and private spaces – the commercial and residential, for example – does not necessarily need to be enforced through 'zoning' uses. The idea of 'defensible space',<sup>53</sup> whereby clearly defined territorial boundaries inspire a greater sense of ownership over private and semi-public spaces among residents and visitors, has also been shown to have an effect on crime and feelings of security. Signals can also be sent through effective management maintenance: maintaining buildings or

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44 Christens, B. and Speer, P.W. (2005) [Predicting Violent Crime Using Urban and Suburban Densities](#). *Behaviour and Social Issues*, Vol. 14: 113-127.

45 Twinam, T. (2014) [Danger Zone: The Causal Effects of High-Density and Mixed-Use Development on Neighborhood Crime](#). Working Paper, University of Pittsburgh.

46 Newman, O. (1973) *Defensible Space: People and Design in the Violent City*. London: Architectural Press, p.112.

47 Teh, B. (2008). [Essays on Crime and Urban Economics](#). University of California, Berkeley, unpublished Ph.D. dissertation.

48 Gorman, D.M., Speer, P.W., Gruenewald, P.J. and Labouvie, E.W. (2001) [Spatial dynamics of alcohol availability, neighborhood structure and violent crime](#). *J Stud Alcohol*, Vol. 62(5): 628-636.

49 Duffala, D.C. (1976) [Convenience Stores, Armed Robbery, and Physical Environment Features](#). *Am. Behav. Scientist*, Vol. 20(2): 227-245.

50 Dunworth, T. and Saiger, A. (1994) [Drugs and Crime in Public Housing: A Three-City Analysis](#). Research report, the National Institute of Justice.

51 Roncek, D.W. and Faggiani, D. (1985) [High Schools and Crime: A Replication](#). *The Sociological Quarterly*, Vol. 26(4): 491-505.

52 Sampson, R.J, Raudenbush, S.W. and Earls, F. (1997) [Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy](#). *Science, New Series*, Vol. 277(5328): 918-924.

53 Newman, O. (1973).

displaying other conspicuous signs that a neighbourhood is occupied and cared for can decrease the perception of an area's vulnerability.

As regards street network design, the literature is deeply divided. Contradictory studies suggest that high levels of permeability – layouts that encourage connectivity and through-movement – can both increase<sup>54, 55</sup> and decrease the risk of crime.<sup>56, 57</sup> Culs-de-sac are often at the heart of these disputes, and crime is often reduced to burglary, but there are a surprising number of studies out there.

Some of these have found that only 'true' culs-de-sac experience the lowest rates of burglary, primarily because potential offenders are made to feel as if they are entering a private area with few escape routes; 'leaky' culs-de-sac on the other hand, which are breached by footpaths, are generally found to be the least safe as they provide offenders with a secluded escape route as well as less natural surveillance.<sup>58</sup>

Against this, design guidance released by the UK government,<sup>59</sup> suggests that once targeted, culs-de-sac are at greater risk of repeat victimisation. Once a crime has been committed, the distance from public scrutiny of culs-de-sac no longer works in their favour, and instead becomes an advantage for the offender.

Natural surveillance, and visibility, remains important. A large number of studies have documented the effect of high quality lighting on crime, which is believed to increase visibility and encourage more people to congregate in the lighted area. A systematic review of this relationship found that improved street lighting reduced recorded crime by seven per cent in

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54 Armitage, R. (2006) [Predicting and Preventing: Developing a Risk Assessment Mechanism for Residential Housing](#). *Crime Prevention and Community Safety*, Vol. 8(3): 137-149.

55 Poyner, B. and Webb, B. (1991) *Crime Free Housing*. Oxford, Butterworth.

56 Chih-Feng Shu, S. (2000) [Housing layout and crime vulnerability](#). *Urban Design International*, Vol. 5(1): 177-188.

57 Hillier, Bill (2004) [Can streets be made safer](#). *Urban Design International*, Vol. 9(1): 31-45.

58 Armitage, R. (2006) [Predicting and Preventing: Developing a Risk Assessment Mechanism for Residential Housing](#). *Crime Prevention and Community Safety*, Vol. 8(3): 137-149.

59 ODPM and Home Office (2004) [Safer Places: The Planning System and Crime Prevention](#).

eight American studies and by 30 per cent in five UK studies.<sup>60</sup> However, a recent study across England and Wales found that there was no evidence of an association between reduced street lighting and increased crime,<sup>61</sup> confirming that even here, the evidence on crime and places is contested.

Key lessons from the research:

- Design open, well-lit areas with low fences and gates. Ensure that places look lived-in and cared for.
- Build housing to encourage 'eyes on the street' that can provide natural surveillance, and encourage walking to increase presence.
- Think carefully about layouts and connectivity, and the trade-offs involved.

## MORE NEIGHBOURLY PLACES

Compact, walkable, and safe places set the stage for social interaction by providing opportunities for people to cross paths. This does not guarantee that they will get on (and the idea of 'defensible space', along with the opportunity to be apart from others, are important in making interactions positive) but it does allow for trust and connections to develop, and social capital to grow. One study found that residents of walkable, mixed-use neighbourhoods were more likely to know and socially engage with their neighbours, trust others, and participate politically.<sup>62</sup>

Certain kinds of physical features and characteristics occur repeatedly in the evidence. Parks and green space, especially if well-managed and maintained, are positively associated with measures of social cohesion

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60 Farrington, D. and Welsh, C. (2002) *Effects of Improved Street Lighting on Crime: A Systematic Review*, Home Office Research Study 251, Development and Statistics Directorate, Crown Copyright, London.

61 Rebecca Steinbach, R. et al (2015) *The effect of reduced street lighting on road casualties and crime in England and Wales: controlled interrupted time series analysis*, Journal of Epidemiology and Community Health.

62 Leyden, K.M. (2003) *Social Capital and the Built Environment: The Importance of Walkable Neighborhoods*. *Am J Public Health*, Vol. 93(9): 1546-1551.

and a perception of mutual trust among neighbours,<sup>63</sup> while another study found that, in public housing developments in Chicago, natural landscaping encouraged more residents to use outdoor areas, and attracted a greater mix of youth and adults.<sup>64</sup>

The attractiveness of walking conditions can also affect community cohesion. This includes the quality of pavements and crossings, low motor vehicle traffic volumes and speeds, landscaping and amenities such as shade, shelter from rain and places to rest. According to one study, two dimensions of street design can create a safer, more attractive environment for pedestrians: either they can target traffic (through traffic-calming street designs or 'road dieting'), or they can target the function and aesthetic of streets (through streetscaping or constructing home zones, for example).<sup>65</sup> Another study suggests that applying 'home zone' features such as benches, tables and play equipment to a section of street might provide greater opportunities for social interaction than traffic-calming initiatives.<sup>66</sup>

Public, semi-private or visible open space near houses, such as porches, gardens and parks, have been found to be strong predictors of the level of 'neighbouring' in an area, as they provide a place for local people to come together to socialise.<sup>67</sup> Similarly, a study of social housing in Baltimore found that the inclusion of semi-private space on each floor, including a common area, increased the level of neighbourliness and mutual aid that took place within the community.<sup>68</sup>

Other studies have focused on the effect of sprawl, with the formation of neighbourhood social ties found to be significantly and substantially related to

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<sup>63</sup> Cohen, D.A., Inagami, S. and Finch, B. (2008) [The Built Environment and Collective Efficacy. Health Place](#), Vol. 14(2): 198-208.

<sup>64</sup> Coley, R.L., Sullivan, W.C. and Kuo, F.E. (1997) [Where Does Community Grow?: The Social Context Created by Nature in Urban Public Housing. Environment and Behaviour](#), Vol. 29(4): 468-494.

<sup>65</sup> Litman, T. (2014) [Community Cohesion As A Transport Planning Objective](#). Victoria Transportation Policy Institute, Canada.

<sup>66</sup> Biddulph, M. (2012) [Street Design and Street Use: Comparing Traffic Calmed and Home Zone Streets. Journal of Urban Design](#), Vol. 17(2): 213-232.

<sup>67</sup> Skjæveland, O., Gärling, T. and Mæland, G. [A multidimensional measure of neighboring. American Journal of Community Psychology](#), Vol 24(3), pp. 413-435.

<sup>68</sup> Halpem, D. (1995) *Mental Health and the Built Environment: More than Bricks and Mortar?* London: Taylor and Francis, p.126.

the degree to which residents are reliant on cars.<sup>69</sup> According to the American social scientist Robert Putnam, each additional ten minutes of commuting by car cuts civic engagement by 10 per cent.<sup>70</sup> This is supported by a comprehensive study from the US, which conducted a survey with 30,000 respondents. Individuals living in communities with few solo commuters were more likely to vote, attend a demonstration or political meeting, sign a petition and belong to a political or reform organisation. This was the case even after controlling for interest in politics. A long commute was a strong predictor of having few friends and low attendance at public meetings, and a modest predictor of depressed local-level social trust and membership in groups.<sup>71</sup>

Key lessons from the research:

- Find ways to minimise commuting times and reduce numbers of solo commuters, especially drivers. This provides more time for engaging in local, civic and social activity.
- Provide public and semi-public spaces, particularly parks, and other amenities to encourage social mixing.
- Make walking routes and other public spaces attractive, and ensure adequate management and maintenance is built in.

## PLACES ARE COMPLEX

The evidence we have reviewed is overwhelmingly from rigorous, usually academic, sources. Much of it comes from the US, where these kinds of studies have been much more common over recent decades. Most is quantitative and empirical in character. Of course, that does not mean that it is infallible: this is, after all, social science and it is impossible to control adequately for all the factors that make up how people live in places. The built environment is not the only factor in people's health any more than it is of how far they engage with their community. It is not a question of

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<sup>69</sup> Freeman, L., (2001) *The Effects of Sprawl on Neighborhood Social Ties: An Explanatory Analysis*, Journal of the American Planning Association, Volume 67, 2001 - Issue 1.

<sup>70</sup> Putnam, R. (2001) *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon & Schuster Paperbacks.

<sup>71</sup> Williamson, T. (2002) *Sprawl, politics and participation: A preliminary analysis*. *National Civic Review*, Vol. 91(3): 235-244.

determinism, but of making the right choice the easy choice. The limit of evidence-based policy in relation to the value of a well-designed place is well-recognised.<sup>72</sup>

The other point to bear in mind is that while some of the evidence is very clear and often rather unsurprising, there are areas where matters are a lot more complex. Even if accepted as robust, the evidence alone cannot design successful places. There will need to be trade-offs. One such area of complexity is exemplified by the question of culs-de-sac, which have been adopted as a way of creating safe, traffic-free spaces for family living. These dead-end streets turn out to be a good way to grow social capital by encouraging households to mix and there is some evidence to suggest that they experience low levels of crime. However, the evidence on crime is mixed (once victimised, the same people tend to become targets again) and it can be disastrous for creating the kind of walkable, well-connected communities that can support other objectives, not least around health and sustainable travel. Choices have to be made and balances struck.

Culs-de-sac also illustrate the tension at the heart of much of the recent debate about residential development: the tension between the immediate consumer of housing (the individual household) and the idea of the wider community as consumer. This is because homes are not an ordinary retail product: homes cannot be shipped around; they are rooted in places.<sup>73</sup> Consequently, we need to think about new development as places rather than as collections of buildings. This approach has underpinned most of the best new residential developments of recent years and in the next section, we review a few of these places.

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<sup>72</sup> Simmons, R., (2015) [Constraints on evidence-based policy: insights from government practices](#), Building Research & Information, Volume 43, Issue 4.

<sup>73</sup> CABE (2010), [Simpler and Better: Housing design in everyone's interest](#).

## 3 THE EXAMPLES

From Ebenezer Howard's vision of the garden city to the planned city of Milton Keynes, Britain has been thinking about how to make good places for a while. In practice, the results have been mixed: Milton Keynes remains popular with its residents and economically successful, but many commentators have criticised it<sup>74</sup> and the other New Towns, often because of failures of management and maintenance, rather than the original design.

More recently, most new large scale residential developments have been urban extensions or new quarters to existing settlements, and only in recent years has our appetite for making wholly new places – from hesitant Eco-towns to a new generation of Garden Cities – been reignited. But among these recent examples, designers and planners have attempted to realise the potential of new development to improve the lives of new and existing residents. Some of the best known examples are international, and three of these are presented here. However, despite the differences in regulatory and market conditions, these kinds of places are still possible in the UK: three recent developments from closer to home are also outlined below. We begin with a high density, mixed-use urban quarter of the city of Tübingen, in Germany.

### TÜBINGEN-SÜDSTADT

*When the city's French barracks closed in 1991, the Tübingen municipal government bought the land with the intention of developing it into a neighbourhood in the south of the city with the ability to provide space for 6,500 residents and work space to employ about 2,000 of them.<sup>75</sup> To initiate and oversee the project, the council set up a redevelopment agency with local planning powers.<sup>76</sup>*

<sup>74</sup> Edwards, M (2001) 'City design: what went wrong at Milton Keynes?' *Journal of Urban Design*, 6, (1).

<sup>75</sup> Wiegandt, C. (2007) Mixed land use in Germany: Opportunities, benefits and constraints. In: G. Knaap, H.A. Haccou, K.J. Clifton and J.W. Frece (eds.) [Incentives, Regulations and Plans: The Role of States and Nation-states in Smart Growth Planning](#). Cheltenham: Edward Elgar Publishing Ltd. pp. 89-92.

<sup>76</sup> CABE (no date) Tübingen-Südstadt: [Design Process](#). Archived on 1 January 2011.

*The redevelopment agency led a top-down process of establishing 'Baugemeinschaften', a type of joint venture between groups of individuals or families who plan and build their homes on a co-operative basis. The agency first organised a series of public events to bring together groups of individuals interested in joining a partnership. If these groups decided to form a co-operative, they were given six months to commission an architect for their plot.<sup>77</sup> The only design constraints were the eaves height, the floor area and the envelope line within which roof shapes had to be contained, giving co-operatives considerable freedom in terms of architectural style. This enabled the agency to recreate the architectural diversity found in urban quarters that grew 'organically' over time.<sup>78</sup>*

*Employing building co-operatives also enabled the municipality to realise its vision of establishing a fine-grain mix of uses in the area. Each co-operative was required to find a non-residential use for their ground floor space, such as an office, community or retail use. Due to the strong emphasis on public space, the fronts of buildings were also required to align with the perimeter of the block and there are considerable restrictions against on-street parking. Private parking is limited to three multi-storey automated car racks that are located no further than 250m from any flat, and only visitors and disabled parking is allowed on-street.<sup>79</sup>*

*The result is a safe, vibrant and highly sustainable urban environment. With streets clearly defined as public spaces, pedestrians are able to use them for casual chats with their neighbours, contributing to a strong sense of local community. Building co-operatives increased feelings of ownership over and personal investment in the neighbourhood. This is reflected in real 'added value', such as residents taking great care to ensure gardens and public spaces are well-maintained. Densities in Südstadt greatly exceed similar*

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<sup>77</sup> CABE (no date) Tübingen-Südstadt: [Design Process](#). Archived on 1 January 2011.

<sup>78</sup> Werkstatt-Stadt (2008) [Tübingen-Südstadt: Federal Institute for Research on Building, Urban Affairs and Spatial Development](#).

<sup>79</sup> City of Charles Sturt (2010). [Local Government Research Project into Best Practice Open Space Provision for Higher Density Infill Development Project: Case Studies](#). Woodville, South Australia.



*developments in other parts of the world, and the concentration of families with children is significantly higher than the national average.<sup>80</sup>*

Previously the site of two power stations, Port Marine illustrates how a relatively dense, compact and mixed-use neighbourhood, like that at Tübingen can be developed in the UK. Situated northwest of Bristol where the River Avon meets the Severn Estuary, the development has the feel of an urban village, with a series of terraces, crescents, individual houses and apartment blocks, set around both communal and semi-private open spaces. The buildings themselves reflect a variety of historic periods, including the Bristol seafaring community's Netherlands connection, as well as more contemporary styles. Narrow streets, discreet parking, extensive hard and soft landscaping and public art works, all add to the sense of place. The original masterplan provided a strong framework for development, although some of the inspiration was lost in the implementation.

The neighbourhood contains 3420 dwellings, including 300 affordable housing units, and is built at 45 dph - nowhere near the densities at Tübingen, but in line with the average net density of London. In addition, 69 680sq.m of employment use and 60 390sq.m of retail space have been built, creating a rich mixture of residential and commercial development, along with a library, a health centre, and a new primary school. A transport interchange augments existing networks, and there are large amounts of open public and green spaces - including a pre-existing wildlife reserve.

## HAMMARBY SJÖSTAD

*Green space is also a key feature of the very successful – and much lauded – redevelopment of a major brownfield site in southern Stockholm, Sweden. The redevelopment gained impetus from Stockholm's bid to host the 2004 Olympics, during which Hammarby Sjöstad was envisaged as an ecological Olympic Village. Although the bid was unsuccessful, the City of Stockholm moved forward*

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<sup>80</sup> CABE (no date) [Tübingen-Südstadt: Evaluation](#). Archived on 1 January 2011.

*with their plans and began construction to transform the run-down industrial area into a low carbon, mixed-use community in 1999. Once completed, the project will have built 11,000 residential units, providing space for 25,000 people.*

*Beginning with their purchase of the majority of land in Hammarby Sjöstad, the project is notable for the exceptionally strong role played by the City of Stockholm. The strategic 'masterplan' developed by the Stockholm City Planning Bureau divided the region into twelve sub-districts that were developed in phases. The City selected three to four architects and planners from the private sector to draw up a proposal for each sub-district, choosing new architects wherever possible. The City assimilated the best features from these sketches into the masterplan. It then developed a detailed 'design code' for each sub-district encompassing the layout, architectural style and design principles of buildings. After receiving planning permission, the City invited groups of three to four developers and architects to develop plots within the sub-district.<sup>81</sup>*

*The aspirations of the masterplan are clearly visible in today's Hammarby Sjöstad. In order to ensure residents have access to a range of goods and services within walking distance of their homes, the City adopted strict policies on ground floor use and offered businesses a two year rent-free subsidy to locate in the area.<sup>82</sup> With an average building height of 6 storeys high, standards on density made sure the City could sustain these shops and services. Together with strict guidelines on facing balconies and front doors onto the street, the rounded mix of uses produced by these standards also served to enhance safety in the neighbourhood by increasing "eyes on the street".<sup>83</sup>*

*The City complemented these initiatives with considerable investment in sustainable transport infrastructure, including cycle paths, a bike*

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<sup>81</sup> CABE (no date) [Hammarby Sjöstad: Design Process](#). Archived on 1 January 2011.

<sup>82</sup> CABE (no date) [Hammarby Sjöstad: Evaluation](#). Archived on 1 January 2011.

<sup>83</sup> Foletta N. (2011) [Case Study: Hammarby Sjöstad](#). ITDP. *Europe's Vibrant New Low Carbon Communities*: 30-45.

*sharing program, scenic pedestrian paths and bridges, a ferry service and expanded tram lines and bus services. In order to discourage car use, a city centre congestion charge was implemented and parking in the area was restricted and priced. The City also made sure to design streets to give pedestrians priority by implementing a number of measures, including high levels of permeability, speed restrictions and frequent zebra crossings on main streets. According to statistics from 2011, only 21 per cent of trips made by Hammarby Sjöstad residents are by car, while 52 per cent are by public transport, 9 per cent are by bike and 18 per cent are by foot.<sup>84</sup>*

*The population density of Hammarby Sjöstad is today higher than Stockholm, and the district succeeded in attracting far more families with children than anticipated, which comprise approximately 16 per cent of the current population.<sup>85</sup> The City also set the goal of providing 25 square metres of public green space per apartment unit, which now comprises 19 per cent of the total area.<sup>86</sup>*

Walkability is a key consideration of Hammarby, with an emphasis on creating attractive routes and securing – through preferential rents for businesses – amenities worth walking to. The development also manages to achieve relatively high densities without ‘overloading’ the site, in part through the careful use of green space. In the UK, an award-winning development at Greenhithe in Kent has achieved something similar.

Ingress Park is a large development set between the Thames waterfront and the extensively landscaped parkland surrounding the grade 2 listed Ingress Abbey, previously landscaped by Capability Brown. The extensive, retained woodland and park are intended to encourage the use of footpath and cycle links throughout the development to minimise car usage, but also to offset the relatively high densities - the development ranges from 40-150 dwellings per hectare, depending on the style of development and their location on the site.

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<sup>84</sup> Foletta N. (2011) [Case Study: Hammarby Sjöstad](#). ITDP. *Europe's Vibrant New Low Carbon Communities*: 30-45.

<sup>85</sup> CABE (no date) [Hammarby Sjöstad: Evaluation](#). Archived on 1 January 2011.

<sup>86</sup> Foletta N. (2011) [Case Study: Hammarby Sjöstad](#). ITDP. *Europe's Vibrant New Low Carbon Communities*: 30-45.

Good masterplanning has driven the development process. The architectural approach needed to be consistent across the eight different character areas within the site. Restricting the palette of materials added to the coherence, creating a development that has a traditional feel inspired by the vernacular. However, despite this conservative appearance, the developers and architects have in fact challenged traditional blanket design approaches to volume housebuilding in terms of density, quality of design, infrastructure, public realm and private amenity space. The Royal Town Planning Institute commented on the respect for the landscape, incorporation and restoration of historic structures, and the connections with surrounding communities.

The eight housing clusters are grouped in such a way to create interesting spaces throughout the development, with the incorporation of pedestrianised public areas through which the spine road is threaded. This makes the pedestrian the priority and helps promote public transport and walkability.

But while we might expect walkability to be central to new developments in Sweden and, to a lesser degree perhaps, the UK, it is not something you would associate with the US, particularly outside the major conurbations of the coastal regions. Manhattan has sidewalks, but Utah does not spring to mind when one thinks of places with pedestrians at their heart. And it is this that makes Daybreak, a new community in South Jordan, Utah, so noteworthy.

## DAYBREAK

*The first of Daybreak's eight neighbourhoods, Founder's Park, was completed in 2004, but the whole site, set over 1670 hectares, is still being built out. It is the largest master-planned community in the US, and when complete, Daybreak will comprise more than 20,000 homes and provide approximately 850,000 sq.m of commercial space and over 480 hectares of parkland.<sup>87</sup>*

*Parkland is important to Daybreak, both as a community amenity and as environmental control: the masterplan uses green and blue space to capture and treat storm water, and to reduce 'heat*

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<sup>87</sup> <http://www.designworkshop.com/projects/daybreak.html>.

*islands' throughout the community.<sup>88</sup> The other defining design principle behind the masterplan is to use a traditional neighborhood development model, which means that all homes are within a five-minute walk or bike ride of a major amenity, from parks to shops to schools, reducing dependence on car travel. One evaluation study found that residents of Daybreak tend to be more physically active than those of other two, less walkable neighbourhoods,<sup>89</sup> while 71 per cent of children walk or bike to school.<sup>90</sup>*

*Alongside Founder's Park, the community will eventually contain a further seven villages, each with its own flavour. Eastlake Village, which opened in 2006, features several parks; North Shore Village is the most architecturally diverse neighbourhood; while Garden Park Village is geared towards more mature residents and features a private clubhouse, a fitness area and easy access to the lake. Lake Village was completed in 2013 and has the largest and most expensive homes; and Creekside Village was also completed in 2013 and has the community's largest park, complete with zip wire and 'jungle gym'.*

*SoDa Row village contains the main shopping area, along with Daybreak's primary concentration of flats, while South Station village, which is still being developed, will be home to both the new University of Utah Medical Centre as well as a new station on the light rail network, connecting Daybreak with the wider Salt Lake Valley region and Salt Lake City itself. There are three schools – another three will be added as the community grows – as well as a number of other community facilities. Most of the residents' daily needs for shopping, day care, recreation, access to nature, and worship can be met within the site.<sup>91</sup>*

*Architecturally, the residential design has been rooted in the local vernacular, inspired by Salt Lake City's historical neighbourhoods; the houses are characterised by brightly-painted facades and large front*

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<sup>88</sup> <https://hodgesdesign.files.wordpress.com/2010/04/daybreak-overview6.pdf>.

<sup>89</sup> Stevens, R.B. and Brown, B.B. (2011) [Walkable new urban LEEDNeighborhood-Development \(LEED-ND\) community design and children's physical activity: selection, environmental, or catalyst effects?](#) *Int J Behav Nutr Phys Act.*, Vol. 8(1): 139.

<sup>90</sup> <http://www.daybreakutah.com/daybreak-story/#sustainability>.

<sup>91</sup> <https://hodgesdesign.files.wordpress.com/2010/04/daybreak-overview6.pdf>.

*porches, designed to encourage neighbourliness. Yet despite the coherence, each district creates its own character and identity: more modern style buildings have been added to the mix, especially in the 'mini-Downtown' around SoDa Row and South Station.*

*In keeping with its founding environmental ethos, the housing units within Daybreak all achieve the highest standards of energy efficiency, compliant with Energy Star certification. Many dwellings feature solar panels, renewable building materials and high performance. Commercial buildings also meet rigorous environmental standards. The local provision of jobs and services has demonstrably reduced the development's impact on local and regional traffic.*

*The importance of the masterplan has been central to the success of Daybreak, as it is to many large urban extensions or new settlements built out over years by different developers. Daybreak was conceived of as a place, rather than a collection of buildings; a place defined by a set of ideas about community, sustainability, and health which are crystallised in principles like the five minute walkability rule. Design decisions – about structure, landscape and architecture – flow from there, providing a flexible but coherent guide to developers as they build out the site.*

While on a completely different scale to Daybreak, Fairfield Park, Bedfordshire – a large former hospital site that has been redeveloped to create 1,200 homes – was built out by eight different housebuilders following a coherent design code and masterplan, strongly supported by the local authority.

Although there is wide variety of house and apartment types, the design code includes a unified 'palette' of materials to be used to ensure a coherent character, and the code also sets out street sections, block sizes and plot dimensions, setbacks and storey heights for all parts of the site. There is a continuous street pattern, and the development becomes less dense towards its edges.

A supermarket, with apartments above, a primary school and a community centre have been built at the heart of the project. All facilities are within easy walking distance for homes, and there are clear cycle and pedestrian

paths across the entire site and around its edges, leading to the surrounding woods and open countryside.

The design code also specifies surfaces and planting for the public spaces, to create an attractive and extensive network of green space, including new and retained landscape features. Importantly these are maintained by a management company, formed by the owners, to ensure that the original high quality character of the development does not degrade through disrepair.

The importance of active management and maintenance, from the outset, is common to all of the examples. These places also show that it is possible to build new settlements and quarters that are walkable that support a mix of services and amenities, and that are coherent enough to become communities: places, rather than collections of buildings.

Central to these success stories is the idea of master planning: producing a robust framework for the development that is prescriptive enough to deliver the original design principles, but also flexible enough to allow the plan to adapt as the site is built out. In every case, the local authority has been the custodian of the vision for the place, and the principles that define it.

# 4 DESIGN PRINCIPLES AND DELIVERY

Compact, mixed-use development, with walkability at its heart, is often claimed to offer significant benefits that go beyond the economic and financial. The evidence, as reviewed here, not only supports those claims, but also points to a set of general design principles that can underpin the creation of good places, that support community resilience and promote social outcomes.

- To improve **travel choices**:
  - Build communities at a high enough density to support local amenities such as shops and public transport, enabling people to walk and mingle with one another.
  - Reduce the need for car use by building communities near public transport links and encourage residents to use active travel methods such as walking and cycling.
  - Ensure street layouts put walking and cycling at their heart, with homes that are close together and well-connected.
- To make **healthier places**:
  - Design places so that the healthy, active choice is the easy choice.
  - Incorporate and encourage the use of green space in order to reduce stress and encourage exercise.
  - Ensure that mechanisms to support the ongoing maintenance of an area are in place from the outset.
- To reduce **crime**:
  - Design open, well-lit areas with low fences and gates. Ensure that places look lived-in and cared for.



- Build housing to encourage ‘eyes on the street’ that can provide natural surveillance, and encourage walking to increase presence.
- Think carefully about layouts and connectivity, and the trade-offs involved.
- To increase **neighbourliness**:
  - Find ways to minimise commuting times and reduce numbers of solo commuters, especially drivers. This provides more time for engaging in local, civic and social activity.
  - Provide public and semi-public spaces, particularly parks, and other amenities to encourage social mixing.
  - Make walking routes and other public spaces attractive, and ensure adequate management and maintenance is built in.

Of course, much has already been written about the design principles that underpin successful development, from the groundbreaking *Essex Design Guide*<sup>92</sup> through the work of CABA<sup>93</sup> during the early 21<sup>st</sup> century. The examples we cite show what is possible. But we know that too often good development has not been delivered, despite the best intentions – the good examples are rare, and the bad found everywhere.

The barriers to deliverability are usually traced back to the competing demands of other considerations – normally costs and the viability of development. The business models of the volume housebuilders, driven by high land values, privilege cost constraint over value creation. Good designers, better materials and arrangements for management and maintenance are usually viewed as too expensive. They are unnecessary costs, when the standard product sells without difficulty.

And yet one of the great unexplained mysteries of the residential development within the UK is that all of the big housebuilders can and do

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<sup>92</sup> Essex County Council (2005), *The Essex Design Guide*.

<sup>93</sup> The work of the Commission for Architecture and the Built Environment, including its publications and extensive case study library, is archived at <http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/home>.

produce excellent, affordable, well-designed housing; yet all but a couple also regularly produce much worse.<sup>94</sup> The difference, we would contend, is local government.

Housing is not like other consumer goods. Houses are not just units; they are part of neighbourhoods. When a developer builds flats, they are also building a place; one which brings costs and benefits to the wider community. So there is not just one consumer of housing but many. And, as the custodian of place and community, the local authority itself is an important consumer. They can exercise their consumer voice through the planning system, which in effect becomes a 'golden equity share' in development held on behalf of their community.<sup>95</sup>

We have seen how important masterplanning is to the examples of successful places in the previous section, and it is through robust master planning for major sites that local authorities can ensure design principles deliver the kind of places that create the social value they want to see; places that deliver healthier, happier, and safer communities. Evidence alone, no matter how robust, will not deliver this. Creating better places takes vision and leadership.

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<sup>94</sup> CABE (2010), *Simpler and Better: Housing design in everyone's interest*.

<sup>95</sup> *ibid.*

# ESSEX COUNTY COUNCIL

**Essex County Council is one of the most dynamic and innovative local authorities in the UK with the size and scope to reflect the county of Essex which is home to 1.4 million people spread across 368,000 hectares of land.**

The public service landscape in Essex is one of complexity and we work closely with a variety of partners, including: 5 Clinical Commissioning Groups (CCGs); 5 NHS Acute Trusts; 2 mental health partnerships; 12 district, borough and city councils; 2 unitary authorities; and over 250 town and parish councils.

Above all, we are passionate about making a positive contribution to the lives of Essex residents and businesses.

Essex County Council has been at the forefront of influencing the design of the built environment, first publishing the 'Essex Design Guide' in 1973 in response to concern about the poor appearance of new housing developments at the time. This guide has since been updated twice – in 1997 and again in 2005 – responding to the changing context for the built environment both nationally and locally. A further update is planned for 2018.

For more information, please visit [www.essex.gov.uk](http://www.essex.gov.uk)



Essex County Council

**Housing has shot up the political agenda over the past decade. Rising prices, a widening affordability gap and historically low building rates (low even before the 2008 crash) have led a succession of governments to introduce measures to increase supply. But while government has wrestled with ways to get houses built, the kinds of housing and neighbourhoods we want to build has fallen largely from the agenda.**

This report examines precisely what that opportunity looks like. Drawing on a systematic review of the evidence, as well as a number of case studies of successful urban design, we set out an agenda for councils to shape new settlements in ways which can improve transport choices, promote physical and mental wellbeing, reduce crime and grow social capital.

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