

Healthy housebuilding: Making 300,000 new homes a year better places to live

Briefing note – April 2018

OVERVIEW

The design of a home and its community is a key contributor to the health and wellbeing of the people who live there. This includes factors such as daylight, temperature, air quality, internal layout and a wide range of neighbourhood factors such as natural environment, amenities and public transport.

This is not just a 'nice to have'. The cost to the NHS of treating medical conditions associated with poor housing has been estimated to be as high as £2.5bn per year¹. Relevant medical conditions include respiratory and circulatory diseases and mental ill-health.

UKGBC reported in detail on this in 2016². Since then, the topic has continued to rise in prominence – in consumer consciousness, among the construction and property industry and among policy-makers. This includes the Prime Minister, who recognised the connection between local environment and wellbeing in her foreword to the 25 Year Environment Plan.

At the same time, Government has committed to building an average of 300,000 new homes each year until the mid-2020s, a target which we support. This provides both a challenge and an opportunity to ensure that this major housebuilding drive optimises health and wellbeing as well as responds to the need for housing.

There is a danger that the debate focuses on quantity at the expense of quality. In our view, both are achievable. We believe that high quality, healthy, sustainable homes will increasingly be demanded by consumers, and that well-designed developments that contribute to the health and wellbeing of whole communities are more likely to be welcomed by existing residents.

There is also an opportunity for the housebuilding industry itself. Putting health and wellbeing at the heart of the 'offer' to consumers, making it a central element of sustainability and quality placemaking, is consistent with the industry's efforts to modernise. This can help make it an attractive industry to work in, and will encourage ongoing efforts to drive innovation.

This short briefing note is intended primarily as a resource for Parliamentarians and policy-makers, and does not attempt to tackle these issues in depth. But we offer it as a contribution to the debate, during a crucial period of time for housebuilding policy.

1 Friedman D. Social Impact of Poor Housing. London: 2010

2 [https://www.ukgbc.org/sites/default/files/08453%20UKGBC%20Healthy%20Homes%20Updated%2015%20Aug%20\(spreads\).pdf](https://www.ukgbc.org/sites/default/files/08453%20UKGBC%20Healthy%20Homes%20Updated%2015%20Aug%20(spreads).pdf)



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Householder survey

A new nationwide survey was conducted in early 2018¹, which gathered views from over 450 people, both home-owners and tenants, living in various types of accommodation (houses and apartments) and from all age groups. The short questionnaire covered the features of a home which contribute most significantly to a sense of wellbeing, both physical and mental. The following represents a summary of key findings for designers and policy-makers, as analysed by Hoare Lea:

1. LET THERE BE LIGHT

Natural light is identified as a key priority for a home. On the whole, the perception of daylight quality in our homes is generally satisfactory, with 80% of respondents rating their daylight quality as 'good' or 'very good'. By comparison, 55% of respondents feel their indoor air quality is 'good' or 'very good', and 50% found their home comfortable in winter (for all construction types).

Given the importance of natural light, it is essential that planners, designers and housebuilders ensure that new and refurbished homes offer good levels of daylight. The comments show there is a preference for dual aspect designs that allow natural light to be distributed evenly throughout a dwelling. This will also support healthy natural ventilation rates and good air quality.

2. SIZE MATTERS

67% of respondents rated the size of their home as 'good' or 'very good', but when asked what people would most like to change about their home, 50% of respondents said they would like more space (especially in the kitchen). Traditionally homes are advertised and sold/let on the basis of the number of rooms, but the survey shows that the actual floor area of a home is important for wellbeing.

Comments in the survey show that residents like a home to be big enough to accommodate guests or to eat as a family, thus meeting the human need for social interaction. People say, for example, they like a 'big living room that includes a dining area', or 'plenty of kitchen/dining space', and rooms that are 'well proportioned'. The perception of constrained space is particularly high in new homes. Occupants in homes built since 2000 are three times more likely to state that their home is too small (18% versus 6%). Space for storage is highlighted as something that could be improved, with 23% of respondents rating space for storage as unsatisfactory.

Therefore the overall floor area, and not just the number of rooms, should be clearly stated for tenants and purchasers when a new home is being marketed.

¹ The full report on the survey findings is available at: www.ukgbc.org/householder-survey

3. YEAR-ROUND COMFORT

The survey shows that residents like the lower energy bills and better winter comfort conditions in modern homes. More stringent building regulations and better standards of insulation are clearly having a beneficial impact on wellbeing. 95% of respondents living in modern homes are satisfied with internal temperatures in winter, compared to 72% in older homes.

In modern homes however, there can be an issue with overheating in the summer. In older homes, 89% of responses show satisfaction with summer comfort compared to 76% in new homes. Therefore while there is positive evidence that new developments are becoming more resource-efficient and better at tackling fuel poverty, the overheating challenge needs to be carefully considered at the planning and design stage of new homes. Careful configuration of windows (with shading if necessary) and suitable ventilation strategies will be necessary to raise wellbeing standards throughout the year.

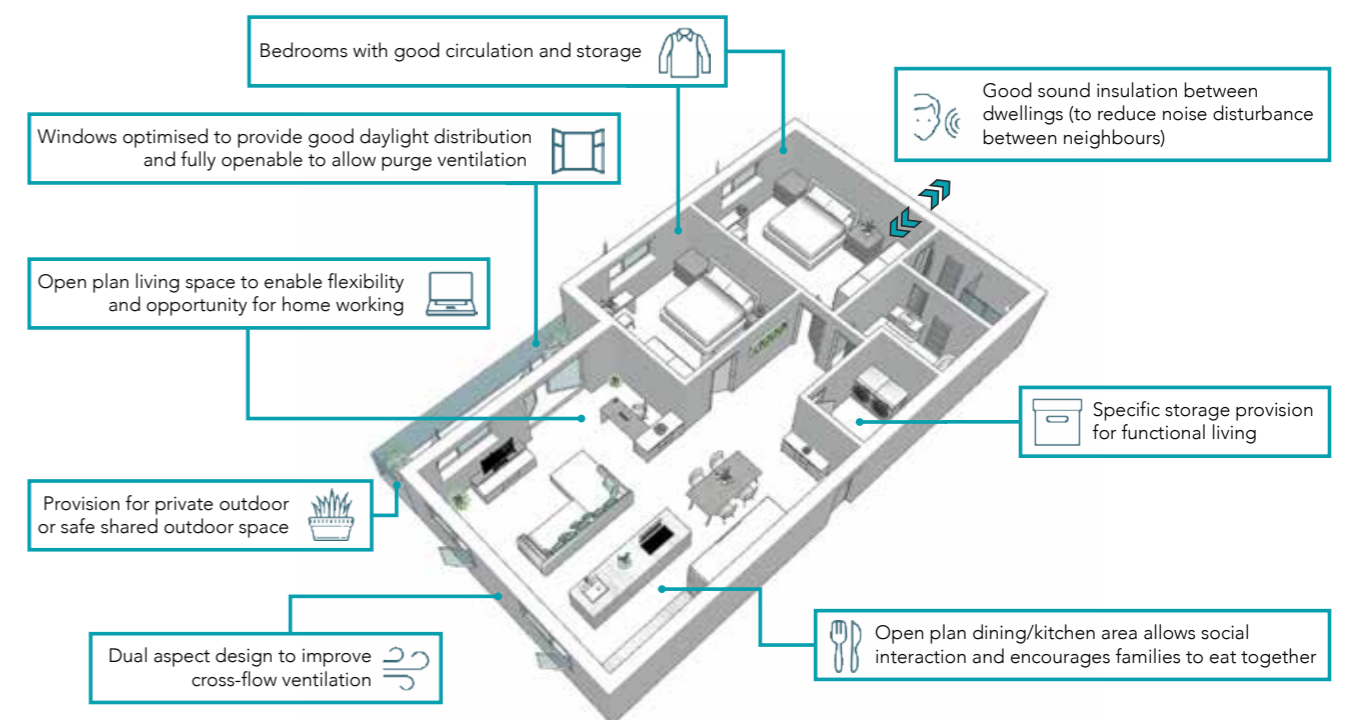
4. COMMUNITY, AMENITIES AND CONNECTIVITY

A good neighbourhood is key to wellbeing. When asked to name the top things that people liked about their home, 53% of respondents mentioned its location. This is not surprising, as we are familiar with location being a major selling-point. But what the survey helps us to understand better is what householders actually mean by a good location – it is somewhere that is perceived as being a safe place to live and that has good transport links and connectivity.

Survey respondents who highly rated the 'community feel of the local area' also noted a 'perception of safety and security' and 'a child friendly neighbourhood'. Interestingly, there is a better sense of place and community with occupants living in older homes (pre-1945) than new homes (built after 2000). Satisfaction ratings are 85% versus 68%, respectively. Sensitive urban planning with a human focus will increasingly have a role to play in creating a sense of community and wellbeing as we increase housing densities.

The survey also shows that some local green landscaping or trees can help wellbeing, as these provide desirable views and support a healthy environment. In addition, the survey shows that the provision of on-site amenities needs consideration in future developments – for example, 18% of residents are dissatisfied with their space for recycling or place to park a bike.

This figure demonstrates in a generic apartment layout some of the key wellbeing priorities identified in the survey. We have chosen to show an apartment as the current housebuilding drive will undoubtedly lead to a greater number of dense developments in sometimes constrained urban spaces. The principles of providing good daylight, layout and ventilation would apply equally to a house or other residential typology.



Case studies

The following case studies represent a snapshot of good practice, which is being delivered up and down the country by many developers and housing providers. We believe that the developments featured are replicable elsewhere, without any special conditions.

Houghton Street, Widnes

Completed in 2012, this development, built to the Code for Sustainable Homes standard, was designed by architects Denovo Design and constructed by Lovell for Halton Housing Trust. The 12 homes are in an area which has suffered from a higher than average crime rate, particularly anti-social behaviour and public order offences. They were built at a time of real economic challenge in housebuilding and with no extra subsidy or special funding. Nevertheless, with an attention to detail, positive healthy outcomes have been delivered to both residents and the wider community.



Key elements contributing to health and wellbeing

- Traditional-looking chimneys have been cleverly re-purposed to be light tunnels, bringing natural light into the corridors
- Continuous background ventilation, formaldehyde-free board and low-VOC paints all ensure good indoor air quality
- The green ivy wall is anti-graffiti, and a source of real pride for residents. In addition, it is low-maintenance, absorbs pollution and provides good habitat for various species
- All properties were provided with a garden shed to encourage outdoor pursuits, such as gardening and cycling.

Kingsbrook, Aylesbury

This development by Barratt Developments will deliver 2,450 new homes, including nearly 500 affordable homes, within three villages. It sets a new benchmark for nature-friendly housing developments through a unique partnership with the Local Authority and the RSPB. The strong natural features are intended to improve children's educational prospects and residents' connection to nature, and contribute to improved mental and physical health and wellbeing. Barratt expects the value and saleability of its homes to be improved by the quality of green space.



Key elements contributing to health and wellbeing

- Around 50% of Kingsbrook will be green infrastructure, including over 100 acres of accessible, green open space, comprising community orchards, allotments and tree-lined avenues. In addition, the development will create a brand new 250 acre wildlife reserve.
- It will also include wildlife-friendly hedgehog highways, new ponds, fruit trees in gardens, bat boxes, swift nesting boxes and nectar-rich planting for bees
- The project will be implemented over about a decade with a comprehensive monitoring programme, developed by Barratt in partnership with RSPB scientists, in order to capture lessons learned.

Portobello Square, North Kensington, London

Portobello Square – masterplanned by PRP for Catalyst Housing Group – is an ambitious scheme which is regenerating and remodelling the Wornington Green Estate, built between 1964 and 1985 and originally containing 538 homes. It has been designed to seamlessly integrate social housing with private housing to create a truly tenure-blind development of 1,000 homes. Considerable thought went into the design and planning to ensure that it has strong health and wellbeing credentials for residents.



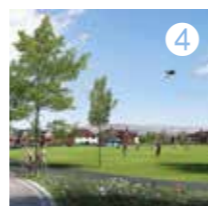
Key elements contributing to health and wellbeing

- Good levels of natural daylight and sunlight, and building performance modelling to address any risk of overheating
- Energy-saving design to improve thermal comfort and reduce energy bills
- The character of the surrounding environment was maintained, with mature trees protected and new green spaces added throughout the development, creating a pleasant environment for residents.

'It's warm, clean and beautiful. It's just unbelievable – it's like living in a hotel, but you can stay.'

Woodford Garden Village, Cheshire

Once home to the historic Woodford Aerodrome, this is one of the largest brownfield sites in the North of England at over 500 acres, providing significant challenges as well as opportunities.



Redrow recognised the potential to incorporate a Garden Village concept into the design, and planning permission was granted in 2015 for a development of 920 homes as well as retail and employment space.

Key elements contributing to health and wellbeing

- Landscape-led design approach with 30 hectares of public open space, including a new village green, playing fields and play areas
- Network of 'green streets' to encourage healthy modes of transport, e.g. cycling and walking
- Private management partner to ensure ongoing upkeep and maintenance of green spaces
- Wide-ranging amenities including shops, public house, doctor's surgery, school and heritage centre will support social and community wellbeing.

Greenhouse, Leeds

This multi-award-winning development was completed by CITU in 2010. Part-new build and part-renovation, Greenhouse has breathed new life into a somewhat deprived area of Leeds, just outside the city centre. The 177 dwellings – a mix of studios and apartments for sale and rent – are cheaper than those in neighbouring areas. They were designed with the aim of making occupants' lives cheaper, easier and more comfortable. This has been achieved through the use of on-site energy production, free Wi-Fi and various amenities.



Key elements contributing to health and wellbeing

- Spacious open-plan living areas provide environments for social engagement
- Renewable energy (including ground source heat pumps and solar thermal panels), combined with super-insulation, provides thermal comfort as well as reduced energy bills
- A range of amenities fosters community spirit. These include a 'freecycle' scheme, an on-site deli/bar and free-to-use gym, and a central courtyard space with communal herb garden
- A bus stop outside the building, a vintage, free-to-borrow bike club, secure storage for 150 cycles and an electric car-charging point are all intended to make getting around easier.

'It is wonderful tranquil living with great living spaces.'

Tequila Wharf, Limehouse, London

Built in Limehouse in 2006 by Telford Homes, this is a 137-flat housing development on the Regent's Canal, alongside the busy Commercial Road. Delivered under normal market conditions, the development was carefully designed to provide almost all flats with a view over the canal, with the City in the distance.



Key elements contributing to health and wellbeing

- Multiple blocks of different heights run along the canal, contributing to optimal views and minimising noise impact from nearby busy road
- Openable windows allow sufficient natural ventilation in summer
- Majority of open-plan living spaces are west-facing, benefiting from afternoon and evening sun
- Some flats benefit from dual aspect and therefore cross-ventilation
- Good security particularly valued by residents, with concierge on duty seven days a week from 7am to 7pm.

'The layout is great for entertaining friends; and the two porters who look after the development 7 days a week make us feel very secure.'

The Atrium, East City Point, Canning Town, London

The Atrium is a landmark building located within the East City Point development, which forms part of the wider regeneration of Canning Town and the Custom House area in East London. Delivered through a partnership between Countryside Properties, the London Borough of Newham and Clarion Housing following extensive consultation with local residents, East City Point will provide 649 homes across a range of tenures. The regeneration also includes a new purpose built primary school.



Through clever masterplanning and architectural design at the earliest stages, the Atrium has substantially overcome the challenges presented by its location, immediately alongside the busy A13.

Key elements contributing to health and wellbeing

- The northern face, closest to the A13, features a fully glazed atrium with sheer curtain walling, glass balustrade walkways, bridges and winter gardens. This protects the building from traffic noise and poor air quality while maximising natural light. The linear nature of the building also provides acoustic protection to the rest of the site
- Air coming into the building circulates naturally from the south face, away from the A13, thus reducing the risk of polluted air from the road entering residents' homes
- Outside, tree-lined streets and a range of traffic-calming measures, including a 20mph speed limit, provide a safe environment
- The arrangement of front doors and ground floor windows also provides natural surveillance.

Image credits:

- 1 Denovo Designs
- 2 Barratt Developments
- 3 PRP
- 4 Redrow
- 5 CITU
- 6 RMA Architects
- 7 Clarion Group

Does a healthier home cost more to build?



With an urgent need to build more homes, policy-makers and the housebuilding industry will reasonably ask whether there is a cost premium to building healthier homes. In short, many features associated with health and wellbeing can be incorporated into the design and delivery of a home or development at little or no extra cost. However, to overcome site-specific challenges – or to really ‘go the extra mile’ – it will sometimes cost more to deliver homes that truly foster health and wellbeing. But, even where there is a premium, this isn’t necessarily a barrier to delivery – especially if home-buyers and renters increasingly value these features. This section explores both of these issues in a little more detail.

COST

It is important to say that many new build homes are likely to be ‘automatically’ healthier in certain respects than some of the UK’s older properties. For example, they are highly likely to be warmer in the winter, and less draughty, because of improvements to Building Regulations over the years. However, as we have set out, there are a broad range of factors that contribute to a home’s health and wellbeing impact, and new homes vary significantly in terms of delivering these features. Many of these features are not required by regulation or planning; and, where they are, regulation tends to mandate a minimum standard rather than best practice.

Part of the difficulty in assessing cost is determining what actually constitutes a healthy home, and what that is being compared against. Although we have set out certain design features, there will be a huge range of complex factors and trade-offs that developers and designers need to consider. We comment on a handful of factors below.

As with all best practice delivery, the key to reducing costs is to design in health and wellbeing features right from the start of the process, rather than adjusting designs at a later date.

- Careful design of building form, orientation and layout of a home have a huge impact on issues such as internal temperatures, ventilation and associated air quality. Good design in this respect need not cost more, although pressure for increased density may require more thought to be given to specific design features.
- As shown, good natural daylight is a key priority for householders. In addition, windows impact ventilation, security, thermal comfort, noise and views. Large floor-to-ceiling windows are often expensive and can lead to overheating and heat loss. The best solutions for health and wellbeing may therefore be more appropriately-sized windows, costing less. Also, a window will achieve better or worse daylight distribution depending upon where it is positioned in the wall.
- Simple natural ventilation strategies often come at no or very limited extra cost, but may not be suitable in all situations. If mechanical or more complex natural systems are required, they need to be accurately sized, correctly installed and commissioned, which, if done properly, comes at a cost. However, savings on energy bills and system maintenance costs are likely to offset this.
- Procuring healthy materials (i.e. low-polluting) may not always be more expensive. However, ensuring they have the correct performance and aesthetics and are installed correctly may take training and time.
- More significant costs are usually around space and access, which have been shown to add some of the largest benefits to health and wellbeing.
- Good landscaping, green spaces and integration of high quality natural environments into a development need not add significant costs, and are known to be valued by buyers. But plans must be put in place for ongoing maintenance.

VALUE TO CONSUMERS

In 2016 Saint-Gobain commissioned an independent survey of just over 3,000 UK homeowners and renters on health and wellbeing in the home¹. The results surprised many. Over 30 per cent of home owners said they would be willing to pay more for a healthy home, with nearly as many renters prepared to pay higher rent for such a home. Of course this is not to suggest that healthy homes should only be available for the better-off, but simply that it appears that consumers do increasingly value the features of a home that support their health and wellbeing, whether that home is at the more affordable end of the market or at the very high end.

Consumers are also becoming more knowledgeable about the choice of homes they face, enabled by social media and more accessible data (on air quality for instance). This suggests that developers need to be sure of the claims they make, through testing or robust procedures.

Good design, process and construction are recognised within third party certification, such as Home Quality Mark, which can help communicate quality – including health and wellbeing – to consumers.



¹ <https://multicomfort.saint-gobain.co.uk/media/1096/saint-gobain-uk-home-health-and-wellbeing-report-summary.pdf>

Conclusions and policy recommendations

Good health and wellbeing outcomes for householders are achievable, but are not yet the norm. There are a number of policy changes that would help them to become so. We recommend that policy-makers focus attention as a matter of priority on the following three key areas:

1. Assuring performance

Developers should be encouraged and incentivised to step up efforts to address the “performance gap”, in other words ensure that homes perform for residents as they were intended to. This is an issue that applies to all elements of design, not least thermal comfort and air quality. This may include Building Regulations transitioning towards a system based on actual performance, and requirements on developers to demonstrate adherence to best practice processes or appropriate third party schemes. In future we would expect to see policy encouraging far more in-use monitoring and transparent reporting of actual performance.

2. Revision to National Planning Policy Framework

The planning system is a crucial lever in driving healthier homes and neighbourhoods. The draft revised NPPF specifically refers to planning policies and decisions which enable and support healthy lifestyles, which we strongly support. However, we share the concern expressed by others¹ that Local Plans – which should be a key tool to catalyse positive outcomes – now appear optional, and health and wellbeing does not feature within the list of “strategic priorities” for councils to address. We would also like to see references to Garden City principles reinstated, which help enable local planning authorities to drive high quality place-making – as seen in our case studies section.

¹ <https://www.tcpa.org.uk/tcpa-health-briefing-on-the-draft-revised-national-planning-policy-framework>

3. Social value

Policy should seek to take account of the positive impact that healthy homes have on society over the long term. This is increasingly well understood through advances in the understanding and measurement of ‘social value’, of which health and wellbeing is a core element. There are several opportunities to encourage better integration of social value into new development. This might include extending the Social Value Act, which encourages public bodies to consider the societal impact of procurement, to include goods and works as well as services; considering a radically different approach to developer contributions to maximise health benefits to local communities; and fully integrating the concept of social value within the planning system.

For more information from UKGBC on housing standards and social value visit:

www.ukgbc.org/housing-standards

www.ukgbc.org/Develop-Social-Value

 #HealthyHousebuilding



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