

# City health check

How design can save lives and money





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# Executive summary

Do our cities support healthy, active choices on a daily basis? Does the architecture and urban design of our cities impact on public health? In this health check we compare three serious health problems in the nine most populated cities in England. These health problems relate to our urban environment and how people behave in cities, specifically the amount of exercise they take.

We ask residents in each major English city what would encourage them to walk more. We then make practical recommendations to local authorities and developers about actions they can take to create healthy places. Case studies illustrate how urban and architectural design can create healthy, walkable environments in urban areas.

Our City health check uncovers two clear lessons:

**First**, there is a clear link between land use and public health in cities.

**Second**, people say it is the quality, not quantity, of streets and parks that will encourage them to walk more.

If **75%**

of people failing to exercise enough across the county did meet recommended levels of walking,

**£675 million** could be saved each year.

$\frac{1}{2}$   $\frac{1}{5}$

The healthiest local authorities in our major cities have almost **half the housing density** and a **fifth more green space** than the least healthy ones.

## The report reveals that:

11

One in eleven early deaths could be avoided<sup>1</sup> and £900 million could be saved every year<sup>2</sup> if everyone met recommended levels of exercise, such as walking for 20 minutes 5 days a week.



75% of people in our major cities who do not meet recommended levels of exercise say they could be encouraged to walk more each week.



Streets and parks designed to be **safer and more attractive** were the most common changes people reported would encourage them to walk more.

# Executive summary

Safety and aesthetics are more important to residents than more direct routes to destinations or an increase in the number of streets and parks. If we want people to walk more, it is a matter of the quality, not the quantity, of routes. We believe there are six actions which would make a real difference to safer and more attractive cities, and help to save the NHS £675 million each year. Local and central government, developers and architects need to work together to deliver these six actions for healthier cities.

If we design places people want to use we can, quite literally, lay the foundations for regular physical activity and thereby reduce obesity, related health problems, and their public cost.

## Recommended actions for local authorities:

1. Local authorities that are comprised of less than 50% green space and/or have a housing density of over 5% should produce a Healthy Infrastructure Action Plan as part of their Local Plan in conjunction with their Health and Wellbeing Boards. They should outline their strategy for making streets and parks safer and more attractive and outline the principles they expect new developments to meet in order to gain planning permission.
2. Local authorities that are comprised of less than 50% green space and/or have a housing density of over 5% should redirect a proportion of their Community Investment Levy to fund their Healthy Infrastructure Action Plan.



### Recommended actions for central government:

3. Guidance as to how planners and developers can aid healthy lifestyles should be embedded within National Planning Practice Guidance.
4. 7 of the 10 city local authorities with the worst health performance have not received the higher growth rate of ring fenced grants to spend on providing public health services. These local authorities should be prioritised in the next round of grants and should use the increase to invest in actions specified in their Health Infrastructure Investment Plan.

### Recommended actions for built environment developers:

5. Developers and architects should commit to Pledges 3 and 5 of the Responsibility Deal Physical Activity Network.
6. Developers should use the Design and Access Statement to prove how their new development will benefit public health through their design of the public realm and its links to existing infrastructure.



# Introduction: designs on health

England's cities are home to over half the country's population.<sup>3</sup> The way our cities are planned has a major impact on our transport, food and exercise choices. Whether we walk to the shops or whether children walk to school is often influenced by the safety, appearance and quality of our streets, pathways and green spaces.

With an expanding ageing population who tend not be as physically active as they should and increasing levels of obesity amongst the wider population the focus on increasing levels of physical activity to improve our health and wellbeing has never been more important.<sup>4</sup> However, recent research by the Department for Transport has found that walking trips have fallen by 27% over the last 15 years.<sup>5</sup> The Department has also stated that if short car journeys were instead taken on foot or by bike, most motorists would achieve recommended levels of physical activity.<sup>6</sup> Even small increases in walking and cycling could benefit our health,<sup>7</sup> and people who report walking or cycling to work are healthier and less likely to be overweight than those who do not.<sup>8</sup>

To achieve this, active travel needs to be integrated into our daily lives and the physical design of our cities and communities can either support or inhibit walking and cycling. By designing places people want to use, we can create the conditions for regular physical activity and thereby reduce obesity and related health problems, like diabetes. There are benefits beyond health too: active travel reduces noise, air pollution and carbon dioxide emissions<sup>9</sup> and good parks and green infrastructure can help create better quality places and higher value properties.<sup>10</sup>

The World Health Organisation (WHO) defines the role of the built environment in cities as "A healthy city offers a physical and built environment that supports health, recreation and well-being, safety, social interaction, easy mobility, a sense of pride and cultural identity and that is accessible to the needs of all its citizens."<sup>11</sup>

Local authorities have, as of April 2013, a responsibility to join local health policy up with other strategies such as housing, transport infrastructure and planning.<sup>12</sup> This affords an opportunity for health professionals and urban designers to work together. This report examines how architects and urban designers can play a role in promoting better health.

There is a wealth of research on health and cities and we already know a lot about the interaction between public health and the way our cities are built. We know:

- That green space is important for health<sup>13</sup>
- That the quality of green space is important<sup>14</sup>
- That health facilities need to be run in buildings that are situated in the community<sup>15</sup>
- That planning decisions have complex impacts on health<sup>16</sup>

This report does not cover the same ground, but instead shows the role that design can play in creating healthier cities. We focus on the shared urban areas which people use on a daily basis, and reveal how physically healthy activities such as walking can be encouraged through the design of those areas. Specifically, we focus on how architecture can encourage regular walking and the impact it could have on the health of our cities.

Recent research by the Department for Transport has found that walking trips have fallen by 27% over the last 15 years.<sup>5</sup>



# How can good design create active places?

## Case study 1

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### Brownfield Estate, London

#### Developer:

Poplar HARCAR,

#### Architect and urban designer:

PRP

#### Local authority:

London Borough of Tower Hamlets

This urban regeneration project was treated as an opportunity to rethink a neighbourhood and transform a run-down and poorly-connected estate.

#### Revitalising spaces and routes

The more used and most useful routes and destinations were identified and revitalised, and new routes were created where they were needed. New trees were planted to create a green grid along these routes throughout the estate. The underused spaces on the estate were reactivated through a redesign that created functional public spaces, to give people a reason for using them. For example, places for play were identified throughout the estate and there is now a new play space on Adderley Street and a refurbished play space along Willis Street.

#### Visual appeal

The parking on the estate was rationalised to help make streets more attractive and easier for pedestrians to navigate. The public and private spaces were better defined to give the estate more structure and create the right balance between privacy and community. Street trees, boundary planting and new spaces provide focus and new public art brings colour and identity to the area. A generous budget of £7 million has been allocated for all phases within Brownfield.





# The cost of unhealthy places

The Department of Health recommends that adults should undertake 150 minutes of physical activity a week.<sup>17</sup> Meeting recommended levels of physical activity can reduce the risk of heart disease, stroke and type 2 diabetes by up to 50%,<sup>17</sup> avoid one in eleven early deaths<sup>18</sup> and save the NHS £900 million every year in the UK.<sup>19</sup> 150 minutes a week is 30 minutes five times a week, and every 10 minutes of exercise counts and it is recommended on a daily basis.<sup>20</sup>

There are health benefits to increasing moderate exercise and risks if people do not exercise enough. The World Health Organisation estimates that in Europe physical inactivity causes an estimated 600,000 deaths per year and leads to a loss of 5.3 million years of healthy life expectancy per year.<sup>21</sup> 9% of deaths from Chronic Heart Disease in the UK could be avoided if people who are currently sedentary or conduct a low level of physical activity increased their activity to a moderate level.<sup>22</sup>

Lack of physical activity is one of the causes of obesity. Over two-thirds of men and over half of women are overweight or obese, which increases the risk health problems such as Type 2 diabetes and cardiovascular disease. There were over 5,000 NHS hospital admissions with a primary diagnosis of obesity in 2007/08, almost seven times greater than the number ten years earlier.<sup>23</sup> Obesity on average reduces life expectancy by six to seven years.<sup>24</sup>

**The estimated cost of health problems relating to obesity and lack of exercise are significant.** In 2004 the Department of Health estimated that physical inactivity cost the NHS £8.2 billion a year; heart disease is estimated to cost the NHS £6.4 billion per year with £1.6 billion attributed to physical inactivity.<sup>25</sup> Nuffield Health research found that if each obese person were to complete about five days of moderate activity a week, there would be a 7% decrease in the likelihood of being obese; this reduction in obesity would imply a cost saving to the NHS of £360 million per annum.<sup>26</sup>

In 2010 Professor Sir Michael Marmot's review reported that "Action taken to reduce health inequalities will benefit society in many ways. It will have economic benefits in reducing losses from illness associated with health inequalities. These currently account for productivity losses, reduced tax revenue, higher welfare payments and increased treatment costs."<sup>27</sup> There are therefore significant economic and social benefits to increasing the amount of physical exercise we do.

The choice to walk and cycle is strongly influenced by urban settings and transport policy, and planners have a crucial role in ensuring residents have cycling and walking options.<sup>28</sup> But it is not just how walkways are planned that makes a difference; their design can also encourage people to walk more often.

## Policy Context: planning for public health

### Health and Social Care Act 2012

The Act gives upper-tier and unitary local authorities a duty to improve the health of local people, embedding public health in local government. Local health policy now has to be joined up with a range of other strategies, such as housing, planning and the environment. Health and Wellbeing Boards in local authorities are tasked with joining up health and wellbeing strategies at a local level, and Clinical Commissioning Groups were empowered to lead the local healthcare system.

### The Public Health Outcomes Framework for England, 2013-2016

The Framework provides the overarching vision for public health, the outcomes government wants to achieve and the indicators to measure public health.

### National Planning Policy Framework and guidance

The National Planning Policy Framework (NPPF) section on design demands that "Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people" (Paragraph 51).

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deaths per year  
and leads to a loss of

5.3 million

years of healthy life expectancy per year.<sup>21</sup>

9x

of deaths from CHD in the UK could be avoided if people who are currently sedentary or have a light level of physical activity increased their activity to a moderate level.<sup>22</sup>

Over 2/3 of men and over 1/2 of women are overweight or obese, which increases the risk health problems such as Type 2 diabetes and cardiovascular disease.<sup>23</sup>

There were over

5,000

NHS hospital admissions with a primary diagnosis of obesity in 2007/08, almost seven times greater than the number ten years earlier.<sup>25</sup>

Obesity on average reduces life expectancy by

6 to 7 years.<sup>24</sup>

# Role of the built environment

**The built environment should support healthy choices, like walking rather than driving.** The Department of Transport suggests that if short car journeys were instead taken on foot or by bike, these trips 'would enable most motorists to achieve recommended levels of physical activity.'<sup>129</sup> The distance between shops, workplaces and schools provide opportunities for walking and these routes need to be connected<sup>30</sup> by pedestrian-friendly streets.<sup>31</sup> Whilst it is difficult for research to prove over time that a specific intervention directly causes a change in public behaviour, there are studies which support the principle that the built environment can encourage exercise. Research has found an association between the number of parks and sports grounds in an area and increased levels of cycling and walking,<sup>32</sup> and meeting recommended levels for walking has been associated with access to a park or green space.<sup>33</sup> A study in 2005 found that people with very good access to large, attractive public open spaces were 50% more likely to achieve high levels of walking.<sup>34</sup>

**The quality and safety of the built environment can influence public perceptions of an area and whether people report exercising there.** Accessibility and quality have been found to be important in the use of green space.<sup>35</sup> The Foresight report '*Tackling Obesity*' found evidence of a relationship between the perceived and actual safety, greenery, aesthetics and upkeep of neighbourhoods and physical activity.<sup>36</sup> For play spaces to be used by children, the safety,<sup>36</sup> functionality and accessibility<sup>37</sup> of the recreational area is important to parents, as well as their perceived quality<sup>38</sup> of the areas.



Cabe found that in ethnically diverse urban areas, the quality and safety of green spaces have an impact on how much they are used and how happy members of the local community feel. They found that, amongst other things, “Poor design such as high perimeter walls blocking views in and out, heavy vegetation and lack of lighting made a place feel unsafe, as well as inadequate maintenance and management.”<sup>39</sup> The Fitter for Walking programme by Living Streets used a combination of street improvements led by the local authority, community-led clean-ups and promotional activities to improve streets and their use. In Weddell Wynd in Wolverhampton, for example, changes included improving walkways, replacing a high curb with flat and more accessible tarmac, resident-led bulb planting and installing bins and benches along a route.<sup>40</sup> A 25% change in levels of walking was found across the five projects evaluated.

Natural England recommends that every household should live within 300 metres of two hectares of natural green space, which is about the size of two football pitches.<sup>41</sup> But urban environments that encourage exercise are not simply about providing green spaces – the type of space, where it is, the scale of it and how it looks and feels all have a role in whether people use it. A recent study of over 3,400 British adults across three locations found that people would drive to green spaces for recreational walking, which may not be as advantageous as walking regularly to local green spaces, or walking more briskly rather than taking a recreational stroll.<sup>42</sup>

Not all cities or areas within them have equal access to green space, so there is a role for architects and urban designers in mitigating the impact of a lack of green space and creating environments to support walking. Walking routes can link to what green space there is, or be more attractive in and of themselves to encourage walking as a transport choice.



There is a role for architects and urban designers in mitigating the impact of a lack of green space and creating environments to support walking.

# How can good design create active places?

## Case study 2

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### High Hazels, Huthwaite, Nottinghamshire

**Developer:**

Places for People

**Landscape architect:**

Groundwork Creswell, Ashfield & Mansfield

**Local authority:**

Ashfield District Council

Places for People manage around 80 homes in this neighbourhood in the former mining town of Huthwaite in north Nottinghamshire. With funding from the Big Lottery Fund's Changing Spaces Programme they sought to use the transformation of a local green space into a new community facility as a catalyst for wider social change.

**Play spaces**

Through community engagement exercises, residents identified the priorities for their neighbourhood as facilities for young people and a community centre. A disused field was identified for development and was transformed through new landscaping to provide a natural children's play area with play equipment, a play water fountain and wetland area. The variety of safe play equipment attracts children and their parents for healthy play.

**Character and context**

The new park also includes sensory planting and a meeting place for parents. Pathways are decorated with bricks designed by residents through an arts project, so that pathways are more visible, attractive and are intimately linked to the local community. An underused green space has been transformed into an inviting and walkable community facility. Some of the volunteers who helped transform the space have gone on to set up a community food growing club utilising under used gardens to grow fruit and vegetables. A range of regular events and activities take place in the park which encourages positive use of the space.





# The City health check

Local authorities have taken on new responsibilities for public health. They have to make decisions that will improve life expectancy and reduce health inequalities.<sup>43</sup> One way identified by the government to improve health outcomes is for local authorities to ensure a strategy for health is integrated with their strategies for housing and planning. But is this evidence clear, will focusing on housing and planning really improve health outcomes and make a significant difference to cities?

To understand whether the design and planning of cities is linked to public health outcomes we compared publicly available data on health indicators for different local authorities. We looked at the availability of green space and housing density and examined how that relates to health outcomes.

We looked at local authorities in the eight core cities<sup>44</sup> and the capital, London, together these are the nine cities with the highest populations in England. We looked at the most and least healthy local authorities across all these cities, and compared the amount of green space in that area. We also compared the percentage of land occupied by housing.

Our analysis finds **a clear correlation between the least healthy local authority areas in cities, and the amount of green space and housing in those areas.**

To assess health outcomes we looked at life expectancy, diabetes, obesity in children and physical activity. We also examine the impact of deprivation.

Our analysis finds a clear correlation between the least healthy local authority areas in cities, and the amount of green space and housing in those areas.



**Manchester**

Population 1,876,200

- Bury MCD
- Manchester MCD
- Oldham MCD
- Salford MCD
- Stockport MCD
- Tameside MCD
- Trafford MCD

**Liverpool**

Population 787,600

- Knowsley MCD
- Liverpool MCD
- St Helens MCD

**Birmingham**

Population 2,419,500

- Birmingham MCD
- Dudley MCD
- Sandwell MCD
- Solihull MCD
- Walsall MCD
- Wolverhampton MCD

**Bristol**

Population 691,000

- Bristol UA
- South Gloucestershire UA

**Newcastle upon Tyne**

Population 829,300

- Gateshead MCD
- Newcastle upon Tyne MCD
- North Tyneside MCD
- South Tyneside MCD

**Leeds**

Population 751,500

- Leeds MCD

**Sheffield**

Population 810,000

- Rotherham MCD
- Sheffield MCD

**Nottingham**

Population 640,900

- Nottingham UA

**London**

Population 9,480,600

- Barking & Dagenham LB
- Barnet LB
- Bexley LB
- Brent LB
- Bromley LB
- Camden LB
- Croydon LB
- Ealing LB
- Enfield LB
- Greenwich LB
- Hackney LB
- Hammersmith & Fulham LB
- Haringey LB
- Harrow LB
- Havering LB
- Hillingdon LB

- Hounslow LB
- Islington LB
- Kensington & Chelsea LB
- Kingston upon Thames LB
- Lambeth LB
- Lewisham LB
- Merton LB
- Newham LB
- Redbridge LB
- Richmond upon Thames LB
- Southwark LB
- Sutton LB
- Tower Hamlets LB
- Waltham Forest LB
- Wandsworth LB
- City of Westminster LB

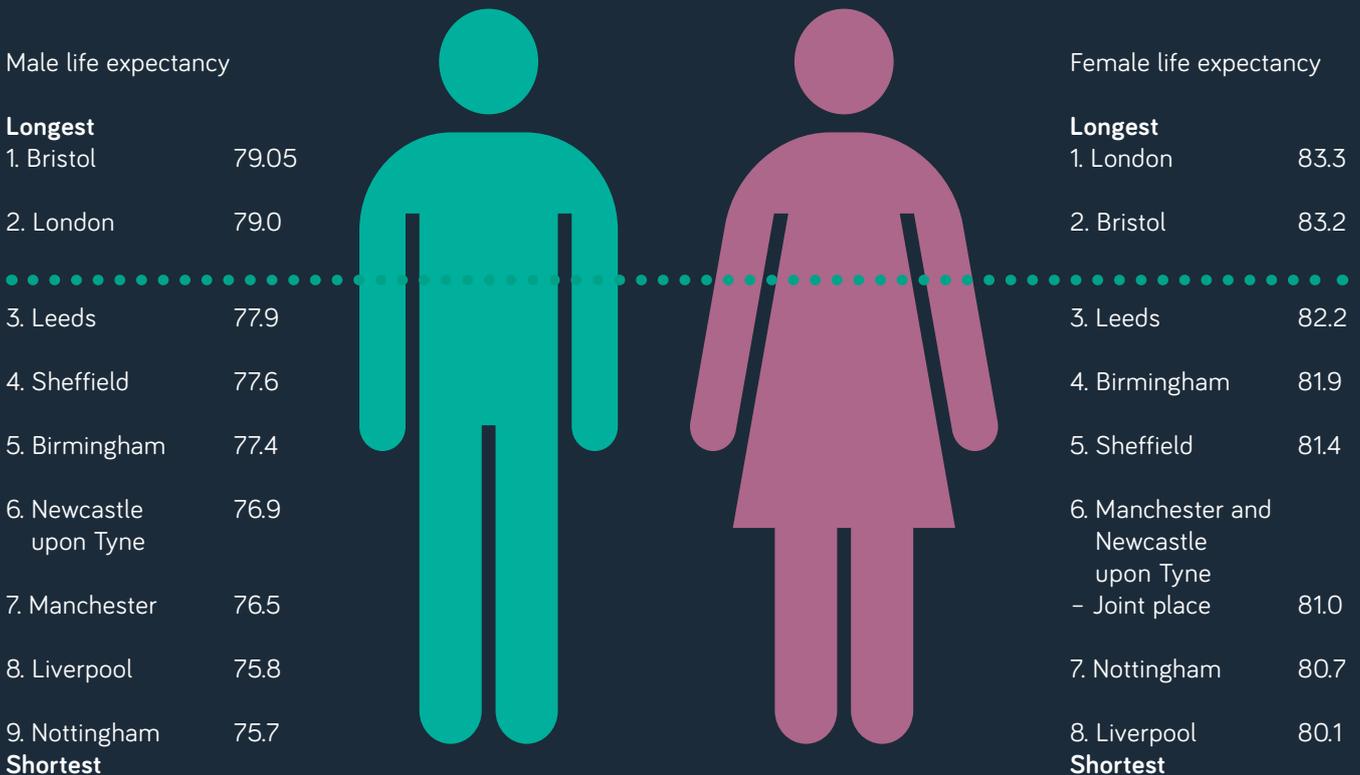
# The City health check

In England the average life expectancy for men is 78.6 years and for women it is 82.6 years. In seven out of the nine core cities for men and in five out of nine cities for women, life expectancy was lower than the national average. In the remaining cities life expectancy was about the same (within one year) as the national average; in two of these life expectancy was marginally better.<sup>45</sup>

Across England, 11.2% of adults report levels of exercise that meet the recommended minimum. In three out of the nine cities (1 in 3) the percentage of physically active adults was lower than the national average. In all other cities the percentage was roughly the same (within 1% either way) or better than the national average.<sup>46</sup>

When comparing the best and worst performing local authorities across all nine cities. The total percentage of green space in the five worst performing local authorities outside London is 51.2%, and the percentage of land occupied by housing is 6.1%. The five best performing local authorities outside London are 73.2% green space and only 3% housing.

Table A: Life expectancy



The areas in our cities in which the fewest people exercise have twice the housing density and a fifth (20%) less green space than the most areas with the most active population.

Land use in the best and worst performing (highest and lowest levels of physical activity) local authorities outside London.

Healthiest (highest levels of activity)

73.2% green space

3% housing

23.8% other



Least healthy (lowest levels of activity)

51.9% green space

6.1% housing

42% other

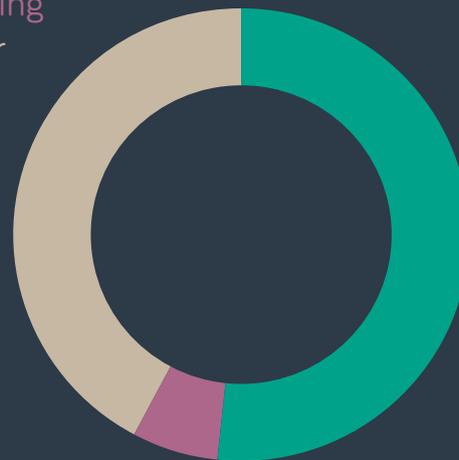
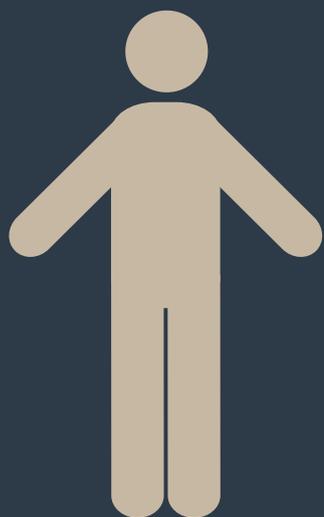


Table B: Levels of physical activity in adults



Least active

Most active

Ranking	9	8,7	6	5	4	3	2	1
Physically active adults	Birmingham	London Newcastle Joint place	Liverpool	Manchester	Bristol	Nottingham	Sheffield	Leeds
Participation in moderate exercise (%)	8.9	9.9	10.4	10.5	10.6	10.9	11.05	11.1

# The City health check

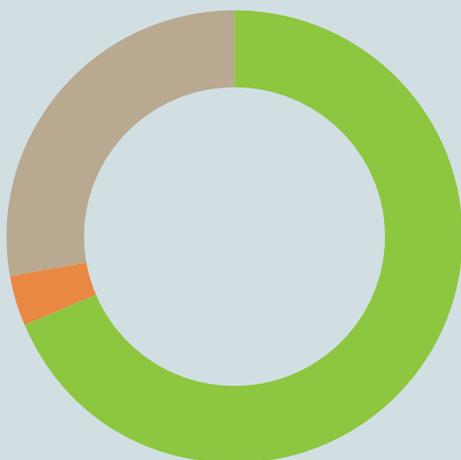
Land use in the best and worst performing (highest and lowest levels of diabetes) local authorities outside London.

Healthiest (lowest levels of diabetes)

68.7% green space

3.6% housing

27.7% other

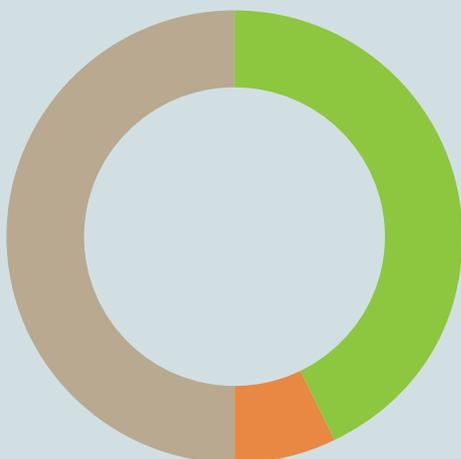


Least healthy (highest levels of diabetes)

43.5% green space

7.1% housing

50.6% other



## Diabetes in adults

Across England 5.5% of adults are registered diabetic although Diabetes UK estimates that 850,000 people have diabetes but have not been diagnosed.<sup>47</sup> Cities within 0.1 of this figure were deemed to be the same as the national average. In four out of nine cities the percentage of diabetic adults was higher than the national average. In all other cities the percentage was roughly the same (within 0.1) as the national average.

The total percentage of green space in the five local authorities outside London with the highest rates of adult diabetes is 43.5%, and the percentage of land occupied by housing is 7.1%. The five local authorities outside London with the lowest rates of adult diabetes are 68.7% green space and only 3.6% housing.

Comparing the prevalence of adults with diabetes, the least healthy areas in our cities have twice the housing density and a quarter less green space than the most healthy areas.



Table C: Levels of adults with diabetes



# The City health check

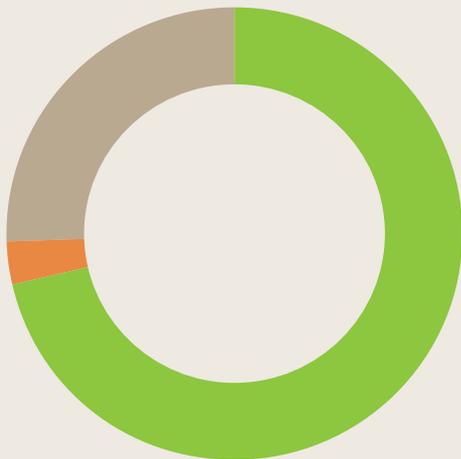
Land use in the best and worst performing (lowest and highest levels of obesity) local authorities outside London.

Healthiest (lowest levels of obesity)

71.4% green space

3.1% housing

25.5% other

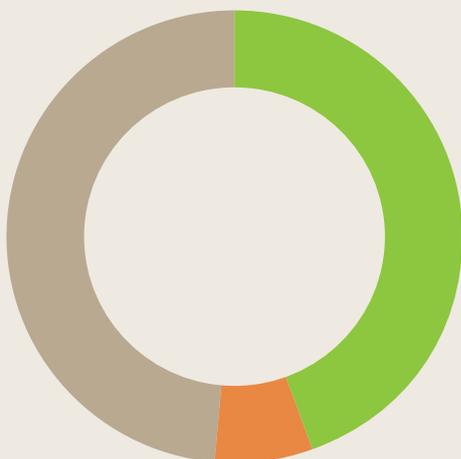


Least healthy (highest levels of obesity)

44.7% green space

6.8% housing

48.5% other



## Obesity in children

Across England 19% of children are obese. In five out of the nine cities the percentage of obese children was higher than the national average. In two cities the percentage was roughly the same as the national average (1% either way) and in one city the proportion of children who were obese was lower than the national average.

The total percentage of green space in the five local authorities outside London with the highest rates of childhood obesity is 44.7%, and the percentage of land occupied by housing is 6.8%. The five local authorities outside London with the lowest rates of childhood obesity are 71.4% green space and only 3.1% housing.

**Comparing the prevalence of obese children, the least healthy areas in our cities have twice the housing density and nearly a third less green space than the most healthy areas.**

## Policy Context:

### Obesity

Government policy Healthy Lives, Healthy People: A call to action on obesity in England (October 2011) calls for local government to develop comprehensive strategies to tackle obesity including “synergies with sustainable transport plans; application of planning rules to benefit healthier lifestyles; use of green spaces and other opportunities for physical activity and sport”.<sup>48</sup>

The Government has committed to the Healthy Places Planning Resource, which help local authorities identify regulatory options for promoting health, for example through supporting green infrastructure (regulating it through green space development control) or promoting active travel (regulating it through local byelaws and car-free developments).<sup>49</sup>

### Ageing population

Government policy Living Well for Longer: A Call to action to reduce avoidable premature mortality (March 2013) announced a ring-fenced budget of £5.45 billion over two years for local authorities to reduce preventable early death. The NHS is to reduce early mortality focused on health care interventions, and local health and wellbeing boards are tasked with looking at local priorities to strategically improve the current and future health of residents.

## Responsibility deal

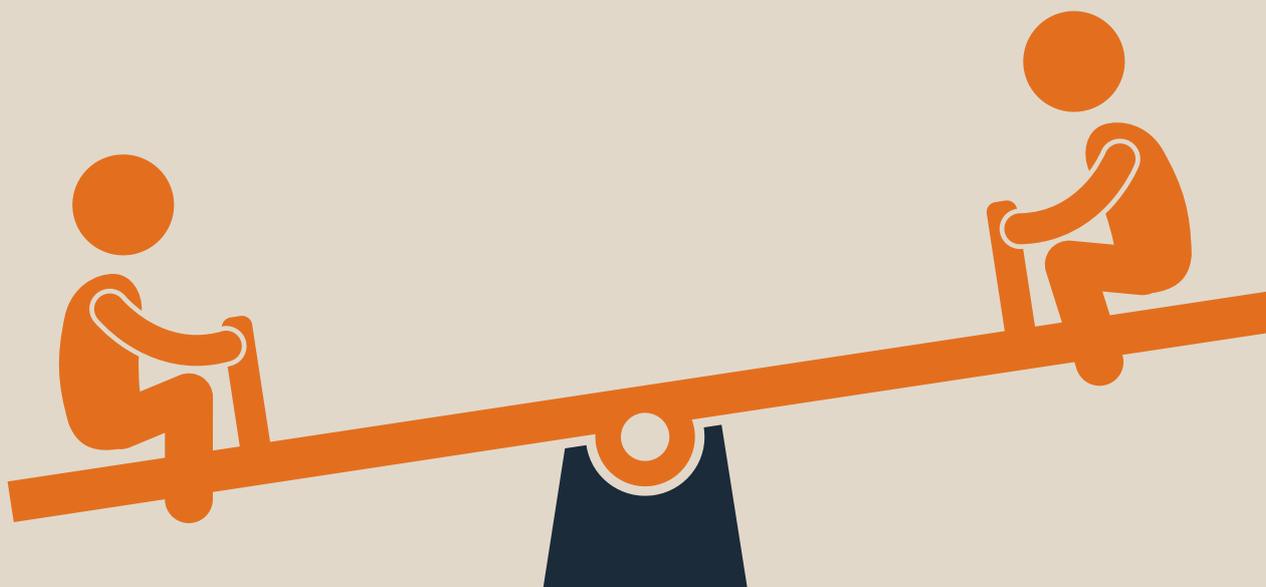
The Public Health Responsibility Deal encourages organisations to support public health through their commercial and community activities. Physical Activity Pledges include:

1. We will use our local presence to get more children and adults more active, more often including engaging communities in planning and delivery.
2. We will contribute to the communication and promotion of the Chief Medical Officers' revised physical activity guidelines.
3. We will promote and support more active travel (walking and cycling). We will set measurable targets for this health enhancing behaviour.
4. We will increase physical activity in the workplace, for example through modifying the environment, promoting workplace champions and removing barriers to physical activity during the working day.
5. We will tackle the barriers to participation in physical activity faced by some of the most inactive groups in society.

Organisations which sign up to this pledge must submit a delivery plan, setting out how they intend to meet each of the pledges.

Table D: Levels of obesity amongst children

	Most obese								Least obese	
Ranking	9	8	7	6	5	4	3	2	1	
Obese children	Liverpool	Newcastle	Nottingham	Birmingham	London	Sheffield	Leeds	Manchester	Bristol	
(%) of obese children	22.8	22.6	22.2	22	21.9	20.9	19.9	19.6	17.3	



# The City health check

## Green space and density

Each of the three health indicators (physical activity, diabetes and childhood obesity) seem to show that the areas that perform most poorly tend to have less green space and a higher housing density. Grouping the indicators together we find that the density of housing is almost double in local authorities that perform poorly and have the highest levels of health problems. They also have a fifth less green space between them. **This shows a prominent correlation – a dense urban environment lacking green space is home to a population that exercises less, and has higher levels of obesity and diabetes.**

Table E: Land use in the best and worst performing local authorities outside London

## Total land area (sqm)



The land area occupied by the healthiest local authorities is nearly double that of the least healthy ones.

## % occupied by housing



Healthy areas have a lower housing density (almost half).

## % occupied by green space



The most healthy areas have 20% more green space (one fifth) than the least healthy areas.

This tells us is that in dense urban environments, the public realm is important and needs to work to ensure healthy lifestyle choices – such as walking to local destinations – is an attractive and commonplace option.

## Deprivation

Professor Sir Michael Marmot's review reported that "In England, people living in the poorest neighbourhoods, will, on average, die seven years earlier than people living in the richest neighbourhoods".

Given deprivation has such a clear link to poor health outcomes how does that link to our findings on green space. Are those areas that have the least amount of green space and higher housing density the ones that are the most deprived? Using data from the Index of Multiple Deprivation we can see deprivation levels across the nine cities (Table F).

But the relationship between wealth, health and place is complex. The Scottish Government found that "better health is related to green space regardless of socio-economic status."<sup>54</sup>

Looking at our analysis of the three health indicators and how they relate to green space and then correlating with deprivation we can see a strong link.

'Better health is related to green space regardless of socio-economic status.'<sup>54</sup>



Table F: Levels of deprivation

City	City average	Ranking (least deprived = 1)
England	19.8	
Bristol	12.9	1
London	26.1	2
Leeds	28.6	3
Manchester	32.8	4
Sheffield	33.8	5
Newcastle	34.9	6
Birmingham	41.8	7
Nottingham	51.5	8
Liverpool	52.8	9

# The City health check

Three of the five local authorities outside London with highest childhood obesity are also in the five most deprived local authorities. Of the five with the lowest rates of childhood obesity, four are in the five least deprived local authorities. However, health is included in the formation of measures of deprivation, which goes some way to explaining the strong correlation. With adult diabetes the link was less pronounced; two of the five most deprived local authorities outside London also featured in the five highest areas for diabetes in adults, and one of the least deprived local authorities had one of the five lowest rates of diabetes. **This suggests that deprivation has a higher impact on children than adult health, and signals the importance of investing in deprived areas now to prevent an even greater health and obesity epidemic in our future.**<sup>53</sup>

This City health check reveals the complexity of health indicators. A city might have broadly average life expectancy and rates of diabetes but have more obese children than the national average: this is the case for London for example. The health check also revealed that at local authority level, the areas that performed worst for child obesity, and diabetes and physical activity in adults, had a fifth less public green space than the best performing areas. Deprivation clearly plays a role here too; it could be that areas with less green space are less affluent and home to more deprived households and wealthier households could afford to live in higher quality areas.

This report looks at how the design of our cities can help to ease – rather than exacerbate – the effects deprivation can have on health.<sup>54</sup>

## Policy Context: equality and health

### Marmot Review: Fair Society, Healthy Lives

Fair Society, Healthy Lives stated that “the more favoured people are, socially and economically, the better their health” and concluded that six policy objectives could reduce health inequalities including:

**E.** Create and develop healthy and sustainable places and communities

The following policy recommendations from the Marmot review are addressed through urban and architectural design.

### Policy recommendations

1. Prioritise policies and interventions that reduce both health inequalities and mitigate climate change, by:
  - Improving active travel across the social gradient
  - Improving the availability of good quality open and green spaces across the social gradient
  - Improving the food environment in local areas across the social gradient
  - Improving energy efficiency of housing across the social gradient.
2. Fully integrate the planning, transport, housing, environmental and health systems to address the social determinants of health in each locality.
3. Support locally developed and evidence based community regeneration programmes that:
  - Remove barriers to community participation and action
  - Reduce social isolation.

Whilst cities will always have richer and poorer demographic areas, the quality of public spaces should enable everyone to make healthy choices, such as taking short journeys on foot.



## Funding health equality

How does funding compare across England's cities? Across the best performing local authorities, the funding per head is generally lower. However, 7 of the 10 worst performing local authorities **did not** receive a higher than average increase in funding, whereas 8 of the 11 best performing local authorities **did**. In this report we make recommendations for prioritising funding and we suggest how each city should invest in a better built environment to encourage healthy behaviour.<sup>57</sup>

### Funding

Table G: Worst performing local authorities

Local authority (poorest city health)	Cumulative growth in funding for public health	2013-14 grant per head
Birmingham	5.7%	73
Dudley	5.7%	60
Gateshead	5.7%	78
Knowsley	5.7%	111
Manchester	21.0%	86
Newcastle upon Tyne	5.7%	74
Sandwell	15.2%	69
St. Helens	5.7%	74
Walsall	16.2%	58
Wolverhampton	5.7%	76

Table H: Best performing local authorities

Local authority (best city health)	Cumulative growth in funding for public health	2013-14 grant per head
Bristol	17.3%	66
Bury	15.7%	51
Leeds	21.0%	52
North Tyneside	10.1%	53
Nottingham	5.7%	89
Oldham	21.0%	65
Sheffield	7.6%	54
Solihull	5.7%	47
Southup Gloucestershire	21.0%	27
Stockport	10.6%	45
Trafford	5.7%	45

# Public health preferences: Survey results

To understand better whether particular design interventions would make a difference we asked people in each of the core cities how much exercise they took each week, and what they believed would increase the amount of brisk walking they do.

Our public survey, undertaken by YouGov, asked respondents how design could encourage them to walk more in their local area, each week. We surveyed 1,330 people living in the nine largest cities in England<sup>57</sup> to find out how much exercise they take each week, and whether any changes to their local area would encourage them to walk more often.

Our survey revealed that

- 59% of people reported not exercising enough (the levels they reported on a weekly basis did not meet recommended weekly levels of moderate exercise like walking nor vigorous exercise).
- 75% of people who do not exercise enough could be convinced to walk more each week and 25% of all respondents said nothing would encourage them to walk more each week.
- Streets and parks designed to be safer and more attractive were the most common changes people reported would encourage them to walk more.

## How did the cities differ?

Five of the nine cities surveyed exclusively feature safer and more attractive design in their top three changes. All nine cities feature safer or more attractive design in the top three changes that would encourage residents to walk more. Closer parks and public green spaces were popular for residents of Newcastle, Nottingham and Leeds, and more direct routes features in the top three motivators for residents of Bristol and Leeds.

This survey is a measure of public perception. The results in this survey suggest higher levels of exercise than are recorded in the official Public Health Observatory statistics. Whilst public perceptions and preferences should not be acted upon in isolation, they are useful to consider alongside other forms of research into how people can be encouraged to be healthier and more active.

In shaping the public realm, we can make it as easy as possible for people to walk by removing issues that may discourage them and instead enticing people to use the streets and parks available.



Pooling the results for all cities, the top four changes that respondents said would encourage them to walk more were:

1. Safer design of pathways
2. More attractive public parks and green spaces
3. More attractive streets and pathways
4. Safer design of public parks and green spaces

### Survey results to the question:

Thinking about your local area... Which THREE, if any, of the following would MOST encourage you to walk more often than you currently do each week?  
(Please tick up to three options)

	Total % of respondents overall	Total % of respondents who do not meet minimum levels of exercise
Safer design of pathways (e.g. better lit or overlooked, more pedestrians etc.)	24%	23%
More attractive public parks and green spaces	23%	24%
More attractive streets and pathways	20%	20%
Safer design of public parks and green spaces (e.g. better lit or overlooked, more pedestrians etc.)	19%	20%
More direct routes to key destinations (e.g. work, shops, social venues, etc.)	17%	17%
Wider pathways, and pedestrian friendly crossings	16%	15%
Closer public parks and green spaces to where I live	14%	15%
Bigger public parks and green spaces	14%	12%
Other	12%	12%
More streets and pathways	4%	4%
Don't know	4%	6%
Not applicable – Nothing would encourage me to walk more often than I currently do each week	25%	25%

# How can good design create active places?

## Case study 3

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### New City Quarter, Hungate, York

#### Developer:

Lendlease and Evans Property Group

#### Architect and urban designer:

John Thompson & Partners

#### Local authority:

City of York County Council

Lendlease and Evans Property Group in conjunction with The City of York County Council set out to develop a new riverside quarter on a brownfield site located within the city's walls but outside its Conservation Area. The result is over 700 apartments and houses and 19,800 sqm of employment, retail, leisure and community buildings and public spaces.

#### Designing city links

Hungate now includes a network of pathways connecting the new development to the established areas of the city, from the historic city walls to the thriving shopping areas. The designers studied the city, and the routes taken by pedestrians, to incorporate the urban design characteristics of York into the new streets, squares and public spaces. Hungate was designed to reflect York's narrow streets; its plan creates variety and order amongst the new streets, spaces and views that connects to them to the surrounding areas. The architecture responds to local character, such as the scale and form of the fragmented buildings, the undulating roof scape and local materials. The urban design therefore both knits the old and new communities together and provides safe, inviting and well overlooked attractive routes between them.

#### Communal appeal

To ensure the public spaces would be well-used, a Community Forum fed into the design and planning process. A Community Development Trust has been set up to help ensure the spaces and community facilities remain attractive and appealing, so that people continue to use them. The Community Development Trust was actively involved in the archaeological work and a series of events and newsletters have been produced for members of the new community.





# City breakdown: how to design fitter cities

Local authorities can focus their planning policies towards active transport and take preventative measures against poor health caused or exacerbated by lack of exercise.

Across all nine cities, safer and more attractive design for streets and public parks would be the most encouraging for the residents surveyed. All nine cities should focus their efforts on these design priorities. Local consultation will be needed to define what safe

design and attractive design mean to local residents. Safety can relate to fear of crime or attack in secluded areas, or it can mean being able to cross the road without being worried about traffic that is moving too fast or hidden by blind corners. How attractive a place is can relate to the design of buildings, how green the streets and roads are, or whether a park has a variety of uses and functions designed into it, from play areas for different age groups to benches overlooking local views.



# London

- Population **9,480,600**
- Life expectancy men ranking **2**
- Life expectancy women ranking **1**
- Physical activity ranking **8**
- Diabetes ranking **4**
- Obesity ranking **5**
- Deprivation **2**

1 healthiest city, 9 least healthy

London was the second least deprived city of those we compared but its health performance varied. Life expectancy in London is similar to the national average, and London performed well compared to other cities (top for men and second for women). London's proportion of adults with diabetes was also similar to the national average, putting London in fourth place. However, London has a higher rate of childhood obesity than England and was ranked fifth out of the nine cities analysed here. Physical activity is also lower than the national average putting London in joint eighth place with Newcastle, with only 9.9% of adults meeting recommended exercise levels according to Public Health Observatory (PHO) data. Our own survey suggests that a larger figure, 45% of London adults, self-report meeting minimum levels of activity.

Our survey suggests that to improve physical activity London's local authorities should include a focus on more attractive designs for public parks. Safe, attractive and playable parks could help to combat high childhood obesity, as well as safe and attractive routes to school.

## Public survey results

Top 3 changes to encourage walking	
<b>All London respondents</b>	
1 More attractive public parks and green spaces	19%
= Safer design of pathways	19%
= Safer design of public parks and green spaces	19%
% who will not walk more	30%
<b>London respondents who did not meet minimum exercise levels (55%)</b>	
1 More attractive public parks and green spaces	24%
2 Safer design of pathways	23%
3 More attractive streets and pathways	20%
= Safer design of public parks and green spaces	20%
% who will not walk more	30%
(Based on average % of each city, not original numbers)	

'Places can be designed to promote health, for example by providing attractive spaces that promote active lifestyles. The Mayor and boroughs will seek to support the delivery of new and improved facilities for sport, walking, cycling, play and other forms of physical activities.'

London Plan 2011<sup>58</sup>



Nando Machado / Shutterstock.com

# City breakdown: how to design fitter cities

## Birmingham

Population **2,419,500**

Life expectancy men ranking **5**

Life expectancy women ranking **4**

Physical activity ranking **9**

Diabetes ranking **9**

Obesity **6**

Deprivation **7**

**1** healthiest city, **9** least healthy

Birmingham was one of the worst performing cities in our comparison of health indicators, coming bottom of the nine cities twice. It was one of only two cities performing below the English average on every health indicator we compared (the other was Newcastle). Birmingham had the highest prevalence of adults with diabetes (6.7%) and the lowest levels of physically active adults; only 8.9% exercise enough according to PHO data. Our own survey suggests that a larger figure, 41%, self-report meeting minimum levels of activity.

Birmingham had the clearest results in our public poll, with a strong call for more attractive public parks and green spaces. 40% of residents who do not exercise enough claimed this would encourage them to walk more, which was the highest proportion of people backing any option in this question across the entire survey. 31% of those that do not meet the recommended level of exercise wanted safer designed pathways and 30% wanted more attractive streets and pathways. Birmingham could also see the biggest improvement, as only 12% of people who do not exercise enough said nothing would encourage them to walk more – the lowest proportion out of all the cities.

### Public survey results

#### Top 3 changes to encourage walking

##### All Birmingham respondents

<b>1</b>	<b>More attractive public parks and green spaces</b>	<b>33%</b>
<b>2</b>	<b>Safer design of pathways</b>	<b>29%</b>
<b>3</b>	<b>More attractive streets and pathways</b>	<b>27%</b>
	% who will not walk more	16%

##### Birmingham respondents who did not meet minimum exercise levels (59%)

<b>1</b>	<b>More attractive public parks and green spaces</b>	<b>40%</b>
<b>2</b>	<b>Safer design of pathways</b>	<b>31%</b>
<b>3</b>	<b>More attractive streets and pathways</b>	<b>30%</b>
	% who will not walk more	12%

(Based on average % of each city, not original numbers)

‘Our priority over the next 20 years will be to extend the existing network of spaces building upon the successes to date.’

Birmingham Big City Plan 2010.<sup>59</sup>



Mihai-Bogdan Lazar / Shutterstock.com

# Manchester

Population **1,876,200**

Life expectancy men ranking **7**

Life expectancy women ranking **7**

Physical activity **5**

Diabetes **5**

Obesity in children **2**

Deprivation **4**

**1** healthiest city, **9** least healthy

Manchester has the highest level of self-reported inactivity, with 66% of respondents failing to meet recommended levels of exercise. It performs better in comparison to other cities in the PHO data on physical exercise coming in at a similar level to the national average. Levels adults with diabetes and obese children were also similar to the national average, although life expectancy in Manchester was lower than the English average. In our survey Manchester residents showed a preference for safer and more attractive designs for streets to encourage them to walk more each week. Aesthetics are the most important for everyone surveyed in this city, giving local authorities a clear mandate to encourage design that is proven to appeal to the local communities.

## Public survey results

### Top 3 changes to encourage walking

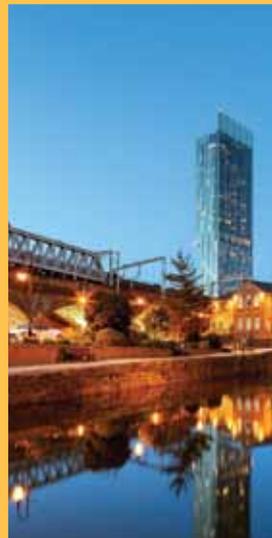
#### All Manchester respondents

<b>1</b>	<b>More attractive streets and pathways</b>	<b>26%</b>
<b>2</b>	<b>More attractive public parks and green spaces</b>	<b>19%</b>
<b>3</b>	<b>Safer design of pathways</b>	<b>24%</b>
	% who will not walk more	25%

#### Manchester respondents who did not meet minimum exercise levels (66%)

<b>1</b>	More attractive streets and pathways	25%
<b>2</b>	More attractive public parks and green spaces	24%
<b>3</b>	Safer design of pathways	23%
<b>=</b>	Safer design of public parks and green spaces	23%
	% who will not walk more	26%

(Based on average % of each city, not original numbers)



Aesthetics are important for those surveyed in Manchester, giving local authorities a clear mandate to encourage design that appeals to local communities.

# City breakdown: how to design fitter cities

## Liverpool

Population **787,600**

Life expectancy men ranking **8**

Life expectancy women ranking **9**

Physical activity **6**

Diabetes **8**

Obesity **9**

Deprivation **9**

1 healthiest city, 9 least healthy

Liverpool ranked poorly in our comparison of health indicators, with the highest percentage of obese children of all the cities, and second highest levels of adult diabetes and lack of activity. It was also the most deprived city of the nine we compared.

In our poll, Liverpool has the highest proportion of people who do not exercise enough and cannot be encouraged to walk more; 33% of those failing to meet recommended levels of exercise said nothing would encourage them to walk more each week. It also had the second highest level of self-reported inactivity, with 61% of respondents failing to meet recommended levels of exercise. For those that could be encouraged to walk more, safer design was a clear priority. Safety should be a critical focus for local authorities in Liverpool: health inequality and deprivation are difficult issues for this city and safer design can be used to encourage an increase in activity.

### Public survey results

#### Top 3 changes to encourage walking

##### All Liverpool respondents

1	Safer design of pathways	22%
=	Safer design of public parks and green spaces	22%
2	More attractive public parks and green spaces	21%
	% who will not walk more	29%

##### Liverpool respondents who did not meet minimum exercise levels (61%)

1	Safer design of public parks and green spaces	26%
2	Safer design of pathways	21%
3	More attractive public parks and green spaces	21%
	% who will not walk more	33%

(Based on average % of each city, not original numbers)

Safer design can be used to encourage an increase in activity in Liverpool.



Tupungato / Shutterstock.com

## Newcastle upon Tyne

Population **829,300**

Life expectancy men ranking **6**

Life expectancy women ranking **7**

Physical activity **8**

Diabetes **6**

Obesity in children **8**

Deprivation **6**

1 healthiest city, 9 least healthy

Newcastle was one of only two cities to perform below the English average on every health indicator we compared (the other was Birmingham). It was worst but one for levels of obesity in children and lack of activity amongst adults, levels of exercise in our own survey were similar to those of other cities with 45% reporting that they meet recommended levels.

Only 19% of people who do not exercise enough could not be convinced to walk more, meaning that positive changes to the environment could improve levels of activity for over 80% of those who need to exercise more. Parks and green spaces could encourage those residents, with more attractive, closer and safer parks ranking as more popular motivators they would like to see. Local authorities in Newcastle should look to improve public parks and green spaces because they could encourage residents surveyed to walk more often than they currently do, including those who do not exercise enough but could be encouraged to do so.

### Public survey results

#### Top 3 changes to encourage walking

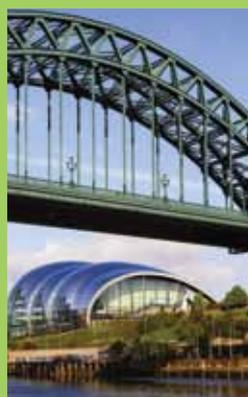
##### All Newcastle respondents

1	More attractive public parks and green spaces	22%
=	Safer design of pathways	22%
2	More attractive streets and pathways	20%
=	Safer design of public parks and green spaces	20%
	% who will not walk more	21%

##### Newcastle respondents who did not meet minimum exercise levels (55%)

1	More attractive public parks and green spaces	24%
2	Closer public parks and green spaces	23%
=	Safer design of pathways	23%
=	Safer design of public parks and green spaces	23%
3	More attractive public parks and green spaces	21%
	% who will not walk more	19%

(Based on average % of each city, not original numbers)



Local authorities in Newcastle should look to improve public parks and green spaces to encourage residents to walk more.

ATGImages / Shutterstock.com

# City breakdown: how to design fitter cities

## Sheffield

Population **810,000**

Life expectancy men ranking **4**

Life expectancy women ranking **5**

Physical activity **2**

Diabetes **7**

Obesity in children **4**

Deprivation **5**

**1** healthiest city, **9** least healthy

In our tables comparing health indicators, Sheffield tended to rank in the middle of the list, neither best nor worst on any of the indicators. However, this does not make it healthy; despite having similar levels of physical activity to the national average, according to PHO data, Sheffield performed below the national average on all other indicators; life expectancy, adults with diabetes and childhood obesity.

In our own survey, Sheffield had the second highest level of self-reported inactivity, with 64% of respondents failing to meet recommended levels of exercise. Of these, 75% could be encouraged to walk more and the top changes that could encourage them to do so were safer designed streets, followed by more attractive streets and parks. Safer street design should be considered an urban design and planning priority for Sheffield's local authorities.

### Sheffield City Region Transport Strategy

"In order to enable active travel there is a need to ensure that streets are well designed, so that they function as both places and movement routes. Where streets balance these roles effectively, they can enhance the quality, and improve the viability, of a place. Good quality design can help reduce accidents, create areas for people to socialise and encourage walking, cycling and use of public transport."

## Public survey results

### Top 3 changes to encourage walking

#### All Sheffield respondents

<b>1 Safer design of pathways</b>	<b>28%</b>
<b>2 More attractive streets and pathways</b>	<b>24%</b>
<b>3 More attractive public parks and green spaces</b>	<b>22%</b>
% who will not walk more	24%

#### Sheffield respondents who did not meet minimum exercise levels (64%)

<b>1 Safer design of pathways</b>	<b>28%</b>
<b>2 More attractive streets and pathways</b>	<b>24%</b>
<b>3 More attractive public parks and green spaces</b>	<b>22%</b>
% who will not walk more	25%

(Based on average % of each city, not original numbers)

75% of responders to the survey in Sheffield could be encouraged to walk more.



# Leeds

Population **751,500**

Life expectancy men ranking **3**

Life expectancy women ranking **3**

Physical activity **1**

Diabetes **3**

Obesity in children **3**

Deprivation **3**

1 healthiest city, 9 least healthy

Leeds performed very well in our comparison of health indicators, with all results either better than or similar to the English average. It came top for levels of physical activity from PHO data, with 11.1% of adults meeting recommended levels, but it did not come top in our own poll despite 42% reporting they do meet recommended levels.

Closer public parks and green spaces would encourage Leeds residents surveyed (the only city where this was the case) and also for those who did not exercise enough. More direct routes were also important to both groups of residents; Leeds was the only city in our poll in which two of the top changes selected by residents related to the lay out of the infrastructure rather than its design. Urban planning will be important in helping Leeds maintain its current health performance, and local authorities should focus on the design of public parks. Since closer parks may motivate residents to exercise, improvements to public transport links could also be investigated by the local authority.

### Priority in Leeds Local Implementation Plan & Transport Strategy 2011 – 2026

“Investment in active, healthy travel to support the Council and LTP goals for greater sustainability.”

## Public survey results

### Top 3 changes to encourage walking

#### All Leeds respondents

<b>1</b>	<b>More attractive public parks and green spaces</b>	<b>29%</b>
<b>2</b>	<b>Closer public parks and green spaces</b>	<b>23%</b>
<b>3</b>	<b>More direct routes to key destinations</b>	<b>19%</b>
	% who will not walk more	27%

#### Leeds respondents who did not meet minimum exercise levels (58%)

<b>1</b>	<b>More attractive public parks and green spaces</b>	<b>29%</b>
<b>2</b>	<b>Closer public parks and green spaces</b>	<b>24%</b>
<b>3</b>	<b>More direct routes to key destinations</b>	<b>17%</b>
	% who will not walk more	27%

(Based on average % of each city, not original numbers)

Leeds was the only city where residents wanted public parks and green spaces closer.



# City breakdown: how to design fitter cities

## Bristol

Population **691,000**

Life expectancy men ranking **1**

Life expectancy women ranking **2**

Physical activity **4**

Diabetes **1**

Obesity **1**

Deprivation **1**

1 healthiest city, 9 least healthy

Bristol performed well across all health indicators; it came top of the tables twice, with the lowest levels of obese children and adults with diabetes. It had lowest levels of deprivation out of all nine cities and was the only city to have lower levels of deprivation than the English average. Life expectancy and levels of physical activity in adults are similar to the national average. However, in our own survey the levels of physical activity in Bristol are similar to other cities, with 48% self-reporting that they meet recommended levels.

Residents of Bristol would be encouraged to walk more if there were more direct routes. Safer designed streets were the top choice (chosen by 25% of all Bristol respondents and 21% of Bristol respondents who do not meet the recommended level of exercise). However, more attractive streets would encourage a higher proportion of people who do not exercise enough. Bristol performed well in the health indicators and the local authority of South Gloucestershire was consistently one of the best performing for its health indicators and lack of deprivation, and with a high proportion of green space. This could suggest that where a green and attractive public realm already exists, the public select other priorities, embedded in urban planning, to create a walkable environment.

## Public survey results

### Top 3 changes to encourage walking

#### All Bristol respondents

<b>1 Safer design of pathways</b>	<b>25%</b>
<b>2 More direct routes to key destinations</b>	<b>21%</b>
<b>3 Wider pathways and pedestrian friendly crossings</b>	<b>18%</b>
% who will not walk more	33%

#### Bristol respondents who did not meet minimum exercise levels (52%)

<b>1 Safer design of pathways</b>	<b>21%</b>
<b>2 More direct routes to key destinations</b>	<b>20%</b>
<b>3 More attractive streets and pathways</b>	<b>17%</b>
% who will not walk more	31%

(Based on average % of each city, not original numbers)

One of Bristol's eight ambitions is to encourage active travel as a means of getting to school and work and as part of everyday life.

Active Bristol Physical Activity Strategy 2011-2016.



# Nottingham

Population **640,900**

Life expectancy men ranking **9**

Life expectancy women ranking **8**

Physical activity **3**

Diabetes **3**

Obesity in children **7**

Deprivation **8**

1 healthiest city, 9 least healthy

Nottingham had worse life expectancy and higher levels of child obesity than the national average, and had the second highest levels of deprivation. But the prevalence of diabetes in adults was lower than average, putting Nottingham in joint second place in our comparative table. Physical activity levels reported by the PHO were similar to the national average at 10.9% meeting recommended levels; in our survey 42% self-reported meeting these levels.

In our survey Nottingham residents showed a preference for safer designed streets to encourage them to walk more each week. For those who do not exercise enough, closer public parks and green spaces also proved a popular motivator. Safety and aesthetics should be key concerns for the local authority, to start to counteract health inequalities.

## Nottingham Local Transport Plan 2011-2016

“Greater emphasis on the value of active travel to increase physical activity levels to help to address health inequalities, whilst it also helps to improve accessibility and tackle affordability issues.”

## Public survey results

### Top 3 changes to encourage walking

#### All Nottingham respondents

1	<b>Safer design of pathways</b>	<b>29%</b>
2	<b>More attractive streets and pathways</b>	<b>23%</b>
3	<b>More attractive public parks and green spaces</b>	<b>21%</b>
	% who will not walk more	21%

#### Nottingham respondents who did not meet minimum exercise levels (58%)

1	Safer design of pathways	28%
2	More attractive streets and pathways	20%
3	Closer public parks and green spaces	19%
=	Safer design of public parks and green spaces	19%
=	More direct routes to key destinations	19%
	% who will not walk more	25%

(Based on average % of each city, not original numbers)

Nottingham residents showed a preference for safer designed streets to encourage walking.



Alastair Wallace / Shutterstock.com

# Recommendations

The City health check shows a clear link between green space and health outcomes. It shows that deprivation is a factor. But that the design of cities could go a significant way to improving the amount of physical activity people carry out day to day. But what will make the difference?

The following recommendations identify what public bodies can do and what developers, architects and urban designers can do to make active transport a part of daily life in our cities and across England.

## Local authorities

### Recommendation 1

Local authorities that are comprised of less than 50% green space and/or have a housing density of over 5% should produce a Healthy Infrastructure Action Plan as part of their Local Plan and in conjunction with their Health and Wellbeing Boards. They should outline their strategy for making streets and parks safer and more attractive, and they should outline the principles they expect new developments to meet in order to gain planning permission.

### Healthy infrastructure is important in dense places

Our research shows that the less healthy areas in our cities tend to have a higher density of housing and a lower proportion of green space. Local authorities are stewards of good design and should ensure cities are designed and built to encourage people to be fit and healthy. Some already include good aims and objectives for public health in their Local Plans, but more can be done to ensure local authorities a) work together, especially at city level and b) ensure private developments achieve excellent standards. Anecdotally, we are told that private developers rarely give architects and urban designers a budget or brief to ensure a new development offers adequate healthy infrastructure: this needs to change. Local authorities can lead that change through a Healthy Infrastructure Action Plan within their Local Plans and in conjunction with their Health and Wellbeing Boards. It should conform to Recommendations 1, 2 and 3 from the National Institute for Health and Clinical Excellence (NICE) Public Health Guidance 41: Walking and Cycling.

### Recommendation 2

The Community Infrastructure Levy (CIL) is an opportunity for local authorities to make new developments deliver value in their communities. Often the transport and public realm infrastructure for a new development runs outside its boundaries; new places need to be opened up and connected to existing places in a safe and attractive network of streets and spaces. Local authorities can use the planning process to ensure new developments deliver active transport infrastructure, but they can also use their central pot of CIL funds to ensure the wider local area sees the benefits too. By investing in healthy infrastructure now savings in healthcare will be made as a result.

CIL should be used to enhance the network of safe and attractive streets shared by new and old communities, and to enhance the quality of local parks and shared green spaces. Local authorities that are comprised of less than 50% green space and/or have a housing density of over 5% should prioritise a proportion of their CIL to fund their Healthy Infrastructure Action Plan.

We can clearly see the link between green space and health outcomes.



## Central government

### Healthy design needs to be enshrined in planning

The Healthy Places Planning Resource helps local authorities determine planning policy interventions which can help to promote health. The Government should promote design strategies which can encourage active travel (walking and cycling). Planning Guidance needs to make clear the benefits of safe and attractive streets and parks. Documents such as *Manual for Streets* and *Secure by Design* are some of the examples of guidance that planners and developers have found helpful in articulating the principles of well-designed streets and spaces. This key content should be both retained and updated to support government commitment for active urban design and a healthy built environment.

### Recommendation 3

Guidance as to how planners and developers can aid healthy lifestyles, should be embedded within National Planning Practice Guidance. It should be clear to Local Planning Authorities how they can ensure places are safe and attractive, to encourage people to walk and cycle more frequently and use public parks for exercise. This should include strategic advice under Local Plan guidance and the following level of detail under **'Key points to take into account when considering ease of movement and the quality of streets' in the section Why does good design matter in planning?:**

Public paths and parks should be:

- **Safe** (well observed and well lit, busy, pedestrian friendly)
- **Attractive** (wide and structured by beautiful buildings and spaces)
- **Accessible** (usable for everyone, including cyclists, and with inclusive design)
- **Visible** (noticeable, prominent and easy to navigate around)
- **Useful** (in the right places and connecting well-used places)
- **Green** (in or connecting to strategic and functional public green spaces)

## Redirecting funding to improve health equalities

Local authorities have been given ring fenced grants to spend on providing public health services, which have increased by an average of 5.5% in 2013-14 and 5.0% in 2014-15. However, 7 of the 10 city local authorities with the worst health performance have not received the higher growth of funds of 10% in each year. These local authorities should be prioritised in the next round of grants and should use the increase to invest in actions specified in their Health Infrastructure Investment Plan.

### Recommendation 4

The following local authorities in England's core cities should be prioritised for an increase in their ring fenced public health grants from central government: Birmingham; Dudley; Gateshead; Knowsley; Newcastle upon Tyne; St. Helens; Wolverhampton. They should use the increase in funding to deliver a Healthy Infrastructure Action Plan.

## Developers and designers

### Developers are responsible for public health

The Responsibility Deal Physical Activity Network has been set up by government to enable organisations to make an individual commitment to public health. Some organisations have pledged to encourage active travel for their staff. But private organisations don't just use the built environment: they also create it. Developers, housebuilders and registered social landlords are directly responsible for the public realm and the design of public spaces and routes as well as those that design them. The organisations which design and build our physical environment should sign up to the Responsibility Deal Physical Activity Network Pledges 3 and 5 to show that they take their impact on public health seriously.

## Recommendation 5

Developers and architects, should commit to Pledges 3 and 5 of the Responsibility Deal Physical Activity Network.

### Developers should create beautiful, healthy places

Residents of England's most populated cities have made it clear that they will use attractive places, and less attractive routes deter them from walking.

Developers are already required to submit a Design and Access statement when they apply for planning permission. Within this statement they should demonstrate that local communities have been consulted and engaged to determine their views on design, and their views have been accounted for in the development proposal. The statement should also show that developers have assessed the local character of the built environment and integrated key characteristics in the design of the new development.

## Recommendation 6

Developers should prove how their new development will benefit public health through their design of the public realm and its links to existing infrastructure. They should identify existing design characteristics of the local area and the views of local people. This information should be submitted as part of the Design and Access Statement when they apply for planning and address how it complies with the Healthy Infrastructure Action Plan.

The quality of our streets and shared green spaces can provide clear benefits to local communities by encouraging walking for active transport and recreation.



## Footnotes

<sup>1</sup>Speech by Rt Honourable Dawn Primarolo, LGA: Sport and Physical Activity conference (11 February 2009) available at [http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/MediaCentre/Speeches/DH\\_094403](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/MediaCentre/Speeches/DH_094403)

<sup>2</sup>Physical Activity Statistics (British Heart Foundation, 2012). Using data from 'The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006–07 NHS costs.' (Scarborough P, Bhatnagar P, Wickramasinghe K, Allender S, Foster C, Rayner M., British Heart Foundation Health Promotion Research Group, Department of Public Health, University of Oxford, 2011).

<sup>3</sup>Cities Outlook 2013 (Centre for Cities, 2013).

<sup>4</sup>Age UK analysed the Health Survey for England to reveal that only 19% of people aged 65–74 meet the minimum level of physical activity that is necessary to benefit their health. (Health Survey for England Adult Trend Tables 2008, Office for National Statistics, 2009).

<sup>5</sup>National Travel Survey (Department for Transport, 2012) [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/225731/nts2012-01.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225731/nts2012-01.pdf)

<sup>6</sup>Cycling personal travel factsheet (Department of Transport, 2007).

<sup>7</sup>Effect of increasing active travel in urban England and Wales on costs to the National Health Service' (Jarrett, J. Woodcock J, Griffiths et al., *Lancet*, 379, pp. 2198–2205, 2012).

<sup>8</sup>Active commuting and cardiovascular risk: a meta-analytic review' (Hamer M, Chida Y., *Prev. Med.*, 46 pp. 9–13, 2008).

<sup>9</sup>Rethinking our approach to physical activity' (Das P, Horton R, *Lancet*, 380, pp.189–190, 2012).

<sup>10</sup>Benefits of Urban Parks: A systematic review (A Report for IFPRA by Cecil C. Konijnendijk, Matilda Annerstedt, Anders Busse Nielsen, Sreetheran Maruthaveeran, 2013) and Does money grow on trees? (CABE, 2005).

<sup>11</sup>Core Theme Three in Phase V (2009–2013) of the WHO European Healthy Cities Network: goals and requirements. [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/100989/E92260.pdf](http://www.euro.who.int/__data/assets/pdf_file/0009/100989/E92260.pdf)

<sup>12</sup>Health and Social Care Act 2012.

<sup>13</sup>See, amongst others, Our Natural Health Service: The role of the natural environment in maintaining healthy lives (Natural England, 2009).

<sup>14</sup>See, amongst others, Community Green, (Cabe, 2010).

<sup>15</sup>See Future health: sustainable places for health and well-being (Cabe, 2009).

<sup>16</sup>See Shaping cities for health (UCL/Lancet Commission, 2012).

<sup>17</sup>Physical Activity Guidelines (Department of Health, July 2011).

<sup>18</sup>Speech by Rt Honourable Dawn Primarolo, LGA: Sport and Physical Activity conference (11 February 2009) available at [http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/MediaCentre/Speeches/DH\\_094403](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/MediaCentre/Speeches/DH_094403)

<sup>19</sup>Physical Activity Statistics (British Heart Foundation, 2012). Using data from 'The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006–07 NHS costs.' (Scarborough P, Bhatnagar P, Wickramasinghe K, Allender S, Foster C, Rayner M., British Heart Foundation Health Promotion Research Group, Department of Public Health, University of Oxford, 2011.) This research estimates that: In 2006–07, poor diet-related ill health cost the NHS in the UK £5.8 billion. The cost of physical inactivity was £0.9 billion. Smoking cost was £3.3 billion, alcohol cost £3.3 billion, overweight and obesity cost £5.1 billion. See <http://www.ncbi.nlm.nih.gov/pubmed/21562029>

<sup>20</sup>Staying Active (British Heart Foundation online, accessed 2013): <http://www.bhf.org.uk/heart-health/prevention/staying-active.aspx>

<sup>21</sup>The world health report 2002 - Reducing Risks, Promoting Healthy Life (WHO, 2002).

<sup>22</sup>The health impacts of spatial planning decisions (The King's Fund, 2009).

<sup>23</sup>NHS Information Centre 2009, quoted in The health impacts of spatial planning decisions (The King's Fund, 2009).

<sup>24</sup>Obesity in adulthood and its consequences for life expectancy: A life-table analysis'. (Peeters A, Barendregt JJ, Willekens F, Mackenbach JP, Al Mamun A, Bonneux L, 2003 in *Ann. Intern. Med.* 138(1), pp.24–32.)

<sup>25</sup>Heart stats 2009 quoted in The health impacts of spatial planning decisions (The King's Fund, 2009).

<sup>26</sup>12 Minutes More... The importance of physical activity, sport and exercise, in order to improve health, personal finances and the pressures on the NHS (Nuffield Health, 2013).

<sup>27</sup>Fair Society, Healthy Lives (Professor Sir Michael Marmot, 2010).

<sup>28</sup>Urban Settings and Opportunities for Healthy Lifestyles: Rediscovering Walking and Cycling and Understanding Their Health Benefits' (Francesca Racioppi, Carlos Dora and Harry Rutter, *Built Environment*, Vol. 31 no. 4, pp.302–314., 2005).

<sup>29</sup>Cycling personal travel factsheet (Department of Transport, 2007).

<sup>30</sup>Tackling Obesities: Future Choices (Dr Bryony Butland et al, Foresight, 2008).

<sup>31</sup>Promoting Public Health Through Smart Growth (Lawrence Frank, Sarah Kavage and Todd Litman for Smart Growth BC, 2006).

<sup>32</sup>Healthy parks, healthy people: The health benefits of contact with nature in a park context. A review of the recent literature (Cecily Maller, Mardie Townsend, Lawrence St Leger, Claire Henderson-Wilson, Anita Pryor, Lauren Prosser, and Megan Moore, *The George Wright Forum*, 2009).

<sup>33</sup>'Environmental Perceptions and Walking in English Adults'. (Foster C, Hillsdon M, Thorogood M, *Journal of Epidemiology and Community Health*, 58(11), 2004, pp. 924–928).

<sup>34</sup>'Increasing walking: How important is distance to, attractiveness, and size of public space?' (Billie Giles-Corti, Melissa H. Broomhall, Matthew Knuiam, Catherine Collins, Kate Douglas, Kevin Ng, Andrea Lange, Robert J. Donovan, *American Journal of Preventive Medicine* Volume 28, Issue 2, Supplement 2, Pages 169–176, February 2005).

<sup>35</sup>The health impacts of spatial planning decisions (The King's Fund, 2009). A number of research findings are summarised here.

<sup>36</sup>Tackling Obesities: Future Choices (Dr Bryony Butland et al, Foresight, 2008).

<sup>37</sup>'Environmental influences on physical activity levels in youth' (Patricia Tucker, Jennifer D Irwin, Jason Gilliland, Meizi He, Kristian Larsen, Paul Hess, *Health & Place*, 07/2008; 15(1):357–63.)

<sup>38</sup>'Environmental influences on physical activity levels in youth' (Patricia Tucker, Jennifer D Irwin, Jason Gilliland, Meizi He, Kristian Larsen, Paul Hess, *Health & Place*, 07/2008; 15(1):357–63.)

<sup>39</sup>Community Green (CABE, 2010).

<sup>40</sup>Economic Evaluation of Living Streets' Fitter for Walking project, February 2012.

<sup>41</sup>Our Natural Health Service: The role of the natural environment in maintaining healthy lives (Natural England, 2009).

<sup>42</sup>'Associations of health, physical activity and weight status with motorised travel and transport carbon dioxide emissions: a cross-sectional, observational study' (Anna Goodman, Christian Brand, David Ogilvie and on behalf of the iConnect consortium. *Environmental Health* 2012, 11:52 <http://www.ehjournal.net/content/11/1/52>)

<sup>43</sup>Health and Social Care Act 2012 and Public Health Outcomes Framework for England, 2013–2016.

<sup>44</sup>Data was collected from local authority level statistics, based upon the local authorities listed as forming each city in the Cities Outlook 2013. Population figures are also taken from the Cities Outlook 2013 and refer to figures from the 2011 census.

### Life expectancy

We analysed mortality rates taken from the NHS Information Centre for health and social care and, for two Strategic Health Authorities in the South East, from Office of National Statistics mortality rates. This data had been collected from 2008 to 2011 and made available through the Public Health Observatories. The result refers to the life expectancy (the age people are expected to live to in that area) according to the year they were born.<sup>45</sup>

<sup>45</sup>Life expectancy is calculated from the mean age of death within a given year, and it is worth noting that infant death can have a skewing impact on this.

<sup>46</sup>Note on this table: When the Public Health Observatories calculate whether the local authority is significantly better or worse than the national average, they use the upper 95% confidence indicator value because the actual indicator is based on a small sample we use the actual indicator.

### Physical activity taken by adults

We assessed surveys taken by Sport England between 2009 and 2011, which were analysed and made available through the Public Health Observatories. People were asked how much moderate-intensity physical exercise they had taken over the four week period prior to taking the survey. The result indicates the percentage of adults who met the recommended levels of exercise, the equivalent of 30 minutes of moderate exercise for five days a week (specifically in this survey, on 20 or more days in the previous 4 weeks). Surveys were taken with samples of 500 people or more in each local authority.

### Diabetes in adults

We analysed data on patients registered with GP practices and made available through the Public Health Observatories. The data reflects patients aged 17 or over and was collected in March 2011.

<sup>47</sup>Diabetes UK website accessed September 2013: <http://www.diabetes.org.uk/Guide-to-diabetes/What-is-diabetes/>

### Obesity in children

We analysed data from Health and Social Care Information Centre in November 2011 and made available through the Public Health Observatories. The data reflects children in Year 6, aged 10–11 years old, and refers to about 500,000 children in state schools. The result indicates the percentage of children who were obese.

<sup>48</sup>Healthy Lives, Healthy People: A call to action on obesity in England, Department of Health, 2011.

<sup>49</sup><http://www.healthylives.org.uk/> Discussed in Healthy Lives, Healthy People: A call to action on obesity in England, Department of Health, 2011.

To examine deprivation when looking at green space and housing density we analysed deprivation data made available through the Public Health Observatories in 2011, derived from the Index of Multiple Deprivation 2010 using data from the Department for Communities and Local Government and Office of National Statistics. The data reflects the percentage of the relevant population in this area living in the 20% most deprived areas in England; the indicator value is the percentage of people living in deprivation.

<sup>50</sup>Duplicates have been removed, so the land area and use of each local authority is only counted once.

<sup>51</sup>Fair Society, Healthy Lives (Professor Sir Michael Marmot, 2010).

<sup>52</sup>For full details as to how the deprivation indices are constructed, see English indices of deprivation 2010: technical report (Department for Communities and Local Government, 2011).

The Index of Multiple Deprivation 2010 is constructed using seven indicators, one of which is derived from figures relating to health and disability. So there will always be a correlation between deprivation and health because health is built into the definition of deprivation. For full details as to how the deprivation indices are constructed, see English indices of deprivation 2010: technical report (Department for Communities and Local Government, 2011).

### Funding health equality

We compare the local authorities outside London that appeared once or more in the best and worst performing areas for the health indicators we assessed earlier in this report. We show the cumulative growth they have each achieved in funding in 2013–14 and 2014–15, to compare how the funds given to city local authorities with the worst health indicators are growing.<sup>56</sup>

<sup>53</sup>The appendices include tables showing whether the five areas with highest and lowest deprivation scores also ranked in the top five for other health indicators.

<sup>54</sup>Fair Society, Healthy Lives (Professor Sir Michael Marmot, 2010).

<sup>55</sup>Health Impact Assessment of green space: A Guide (Health Scotland, green space scotland, Scottish Natural Heritage and Institute of Occupational Medicine, 2008).

<sup>56</sup>150 people in London, Birmingham, Manchester, Newcastle and Sheffield; 120 in Nottingham; 152 in Liverpool; 153 in Leeds and 155 in Bristol.

<sup>57</sup>Safer design of public parks and green spaces was ranked in joint third place by the subset of respondents who do not exercise enough, and was fourth place across all respondents, selected by 19% of them.

<sup>58</sup>London Plan 2011 <http://www.london.gov.uk/priorities/planning/publications/the-london-plan>

<sup>59</sup>Birmingham Big City Plan 2010 <http://bigcityplan.birmingham.gov.uk>

