

# Community green: using local spaces to tackle inequality and improve health



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# 1 Introduction

**Community green uniquely investigates the inter-relationship between urban green space, inequality, ethnicity, health and wellbeing. It is the largest study of its kind in England.<sup>1</sup>**

**Some of the most acute effects of deprivation are felt by black and minority ethnic communities living on a low income in urban areas. The poor quality of their local environment has a considerable impact on their health and wellbeing.**

**People living in deprived urban areas recognise and appreciate the value of local green spaces, but they underuse the spaces that are most convenient because these spaces are often poor quality and feel unsafe. The study found, for instance, that less than 1 per cent of people living in social housing reported using the green space on their estate.**

**'Cultural diversity enriches and vitalises collective life, and is desirable not only for minority communities but also for the society as a whole. It adds a valuable aesthetic dimension to society, widens the range of moral sympathy and imagination, and encourages critical self-reflection...When the public realm prizes uniformity, diversity tends to be devalued throughout society'<sup>5</sup>**

*Professor Bhikhu Parekh*

The report demonstrates that improving urban green space represents an important and cost-effective opportunity for people to transform their local neighbourhoods and improve their quality of life. Local people are best placed to know the benefits that good-quality green spaces contribute to their community. But they have not always had the opportunity to direct improvements to their local environment.

A changed political and economic landscape will include a fundamentally different relationship between local people and landowners, including registered social housing providers and local authorities. The most obvious opportunity is improving the open space on social housing estates. Chapter 4 sets out the findings from the study.

## Background to the study

Sustained investment in recent years arrested the historic decline of public urban green spaces, especially parks. People are using their parks and green spaces more, and value them more. Almost nine out of 10 people use parks and green spaces and value this use for their health and wellbeing.<sup>2</sup> But even during this period of relative prosperity, not everywhere benefited equally.

This study follows earlier research commissioned by CABE, *Urban green nation: building the evidence base*, which explored over 70 major data sources to discover what the quantitative data says about England's publicly owned and managed urban green space. It found that if you live in a deprived inner-city area you have access to five times fewer public parks and good-quality general green space than people in more affluent areas.<sup>3</sup>

In this second piece of research, *Community green: using local spaces to tackle inequality and improve health*, we focused on ethnicity because diversity is increasing. It is no longer accurate to talk about ethnic 'minorities' in some areas. In the last decade there has been a large increase in the percentage of black and minority ethnic young people. For instance, half of the Bangladeshi population in Britain is under the age of 21.<sup>4</sup>

1 Research by OPENspace research centre, Edinburgh College of Art, in collaboration with Heriot-Watt University.

2 *Urban green nation: building the evidence base* CABE, 2010  
[www.cabeurl.com/cf](http://www.cabeurl.com/cf)

3 *Urban green nation: building the evidence base* CABE, 2010  
[www.cabeurl.com/cf](http://www.cabeurl.com/cf)

4 *Ethnicity and family: relationships within and between ethnic groups*, Platts, 2009 [www.cabeurl.com/c2](http://www.cabeurl.com/c2)

5 [www.cabeurl.com/d9](http://www.cabeurl.com/d9)

## Health, ethnicity and inequality

*Urban green nation* also revealed that in areas where more than 40 per cent of residents are black or minority ethnic there is 11 times less green space than in areas where residents are largely white. And the spaces they do have are likely to be of a poorer quality.

Although where you live and the services you receive is intimately related to income, our research found a difference, by ethnicity, that was over and above what would be expected for level of income alone.

The majority of the UK's black and minority ethnic communities live in the most deprived wards in English inner-cities. The poverty rate for Britain's black and minority ethnic residents overall is 40 per cent, double the rate for white British people. Furthermore, child poverty is highest, up to 74 per cent among Bangladeshi children.<sup>6</sup>

The relationship between low income and poor health follows a social gradient.<sup>7</sup> People living on a low income are more likely to experience worse health and be less physically active.

The 2010 Marmot Review of health inequalities revealed that the gap in life expectancy between the rich and poor is greater in England than in three quarters of the Organisation for Economic Co-operation and Development (OECD) countries.<sup>8</sup>

In addition, some groups report worse health. Bangladeshi and Pakistani people and African-Caribbean women, for instance, are more likely to report bad or very bad health compared to the general population.<sup>9</sup>

This inequality matters. Some people must manage a greater number of burdens yet have fewer economic and environmental assets or resources to draw upon.

Historically, poor areas in towns and cities have been exposed to a larger share of environmental risks and dangers. In a changing climate they are also most likely to suffer disproportionately. For example, they are more likely to flood and to experience the urban heat island effect.

Planning for the future must take this into account and ensure some areas are not more likely to be hazardous to health and wellbeing than others.

Providing good-quality green space is a hugely effective way to tackle these inequalities. Green space has been proven to reduce the impact of deprivation, deliver better health and wellbeing and create a strong community. The simple presence of green space is related to a reduced risk of serious problems like depression and lung disease. Living close to green space reduces mortality, which can help reduce the significant gap in life expectancy between rich and poor.<sup>10</sup>

The *Liverpool city green infrastructure strategy* identifies areas of the city where climate change may have a particular impact. It highlights a relationship between high levels of coronary heart disease and poor mental health and low quantities of green space in parts of the city. The strategy's action plan sets out 37 actions to ensure that green infrastructure is built into proposals to deliver health and wellbeing benefits and help address potential issues that, if not addressed, will arise in the long term.<sup>11</sup>

6 *Ethnicity and family: relationships within and between ethnic groups*, Platts, 2009 [www.cabeurl.com/c2](http://www.cabeurl.com/c2)

7 *Focus on health*, Bajekal and Osbourne, 2006.

8 *Fair society, healthy lives* The Marmot Review, Strategic review of health inequalities in England post-2010, 2010. For a list of the OECD countries [www.cabeurl.com/c3](http://www.cabeurl.com/c3)

9 *The health of minority ethnic groups*, Health survey for England, 2004 [www.cabeurl.com/c4](http://www.cabeurl.com/c4)

10 *Effect of exposure to natural environment on health inequalities: an observational population study*, Mitchell, R and Popham, F, *The Lancet*: 372, 2008.

11 *The Liverpool city green infrastructure strategy*, Mersey Forest Commissioned by Liverpool City Council on behalf of Liverpool First for Health and Well Being, 2010.

## The study methodology

There is little research investigating income and race inequalities in relation to urban green space provision and use. While a lot is already known about the relationships between income and ethnicity, and income and health, there have been very few studies that look at how green space, ethnicity or deprivation, and health are related. A handful of studies have looked at this within the context of urban areas. Few are large scale. This study fills a significant information gap.

The study set out to investigate:

1. How significant the quality of urban green space is to the health and wellbeing of different socio-economic and ethnic communities living in six deprived urban areas of England
2. The impact of varying quality of urban green space on health and wellbeing in these areas.

It focuses on six deprived and ethnically diverse study areas. However, we found lessons that are applicable to all neighbourhoods, regardless of their level of material deprivation or size of their minority ethnic population.

Pairs of urban areas were chosen from three regions:

- two in the Greater Manchester area – Greater Manchester A and Greater Manchester B
- two in the West Midlands – West Midlands A and West Midlands B
- two in London – London A and London B.

The areas were chosen because of their high level of deprivation, high percentage of black and minority ethnic populations and because they contained green spaces of different levels of quality.<sup>12</sup> Information on the quantity and quality of green space in the areas was drawn from *Urban green nation*. The pairs of areas in the three regions contained similar amounts of green space: no less than 20 per cent and no more than 45 per cent of their total area.<sup>13</sup>

This study used a range of qualitative and quantitative research methods:

- A literature review of over 100 publications and articles on urban green space, deprivation and ethnicity and its contribution to health and wellbeing. A review of 50 projects engaging people in the design, ownership and management of local urban green space supplemented the results of the literature review. The results are set out in chapter 2.
- 523 face-to-face, 45-minute-long facilitated interviews with white British (22 per cent of interviewees), Pakistani (22 per cent), Bangladeshi (17 per cent), black African and African-Caribbean (12 per cent) and Indian people (11 per cent).<sup>14</sup> People were asked how important their local green spaces are in relation to other factors in making an area 'a good place to live'. The survey also asked people about their health, their use of green space, the quality of their local green spaces and how improvements to their local spaces would affect their use, and levels of physical activity.
- Focus groups discussing how access to, and use of, urban green space affects health and wellbeing among residents in four of six of the case study areas and facilitated audits, involving community members and professionals, to assess the quality and provision of green space in all the case study areas. The results are set out in appendices 3 and 4.

We found that people were very willing to talk to us about their local green spaces, especially those households with children.<sup>15</sup> The results of the survey are set out in chapter 3.

12 Indices of multiple deprivation data. Areas chosen from the top 20 per cent of deprived neighbourhoods.

13 Information on quantity of green space was derived from the generalised land use database (GLUD) and CABE green space data. *Urban green nation* outlines the strengths and weaknesses of GLUD for calculating quantity of green space in urban areas [www.cabeurl.com/cf](http://www.cabeurl.com/cf)

14 16 per cent of people were from other black and minority ethnic groups that included dual heritage people, Chinese and Turkish people. African-Caribbean and black African interviewees were combined into one group for analysis due to small study numbers.

15 68 per cent of people we asked agreed to take part in the survey.

## **Environmental justice and inclusion**

The term 'environmental justice' began to appear within mainstream political debates in the UK in the late 1990s. Other countries have a longer history. For instance, in India in the 1970s, the Chipko and Appiko movements were founded to fight against deforestation and for the rights of the people who depended on the forest for their livelihood.

**'The principles of environmental justice are pretty simple. Living in a clean and healthy environment is everyone's right. The most vulnerable people with the least power and money see these rights denied on a daily basis. For example, air pollution, the siting of hazardous installations, flooding, inadequate enforcement of environmental laws, bad urban planning; or simply not having any access to the natural environment'**

*Capacity Global<sup>16</sup>*

In Kenya, Wangari Maatai established the Green Belt Movement in the late 1970s to promote environmental conservation and community development with women living in poor rural areas. And in America, the recognition of the social dimensions of exposure to environmental risk emerged in the 1980s through the work of grassroots community activists. Women were often prominent in these movements.

Prior to the 1990s, work around inclusion in the environmental sector in the UK was expressed under the banner of 'equality of opportunity'. In 1989, work by environmental thinkers such as Professor Julian Agyeman and Judy Ling Wong culminated in the establishment of the Black Environment Network (BEN).<sup>17</sup>

Established to facilitate participation of all ethnicities in the use, enjoyment and protection of the environment, BEN challenged the traditional focus of nature conservation and highlighted the importance of focusing attention on encouraging access to nature for all people. BEN argues that there is no such thing as a purely environmental project – the specific social, cultural and economic context must always be taken into account.

**'A vital sense of belonging and ownership of the environment at large is a basic building block for the care of the environment....There is a whole field of work to be done with regard to the research and expression of the multicultural fact of Britain's landscape.'**

*Judy Ling Wong, Director, BEN<sup>18</sup>*

The duty to promote race equality was enshrined in the Race Relations (Amendment) Act 2000. Nonetheless, in 2001, Professor Julian Agyeman argued that black and minority ethnic people continue to be:

**'Routinely short-changed by a systematic indifference to their environmental and planning needs.'<sup>19</sup>**

The recognition of equity and justice within environmental management and policy is intimately related to sustainability. For instance, the 1999 UK Sustainable Development Strategy states that everybody should share equally the benefits of a clean and safe environment. Future generations, and those living elsewhere in the world, should not be treated unfairly in the pursuit of our own needs.<sup>20</sup>

16 Capacity Global is a UK based non-governmental organisation and social enterprise which works on environmental justice issues. It works with people and communities in urban areas who suffer from social, environmental and economic deprivation, to ensure their voices get heard [www.capacity.org.uk/](http://www.capacity.org.uk/)

17 [www.ben-network.org.uk/](http://www.ben-network.org.uk/)

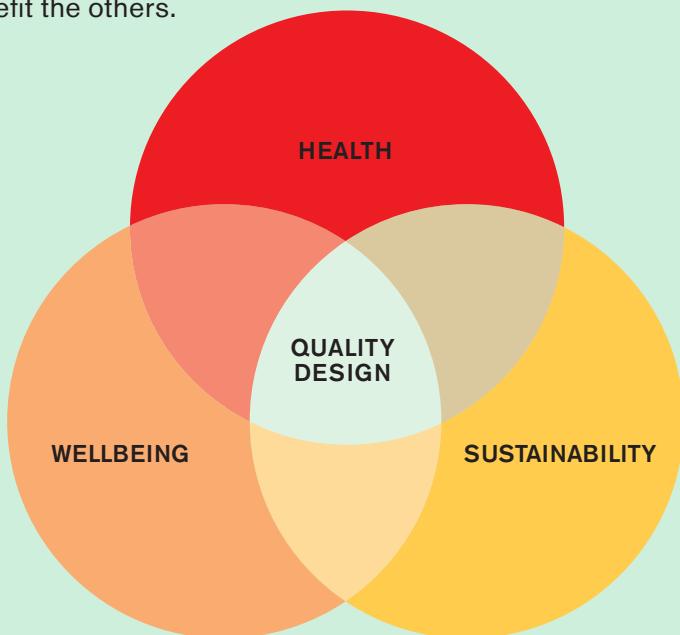
18 *All colours green*, article for New ground – the magazine of Labour's environmental campaign Spring 1997.

19 *Ethnic minorities in Britain: Short change, systematic indifference and sustainable development*, Agyeman, J, 2001, Journal of environmental policy and planning (3).

20 [www.cabeurl.com/da](http://www.cabeurl.com/da)

### Figure 1: Health, wellbeing and sustainability

CABE's publication *Future health: sustainable places for health and wellbeing* sets out how good design makes healthy places.<sup>21</sup> The Venn diagram shows the inter-relationship between health, wellbeing and sustainability, and how quality design to address one can benefit the others.



The agenda of environmental justice or equity continues to evolve. For instance, local authority sustainable development strategies are now required to address equity and justice issues and ensure that the perspectives of black and minority ethnic groups are incorporated. At a national level policies, such as DEFRA's Outdoors for All strategy, aims to improve equality of access to urban and rural open space over the next 10 years.<sup>22</sup>

The following chapters of this report set out the results of the research.

<sup>21</sup> [www.cabeurl.com/e1](http://www.cabeurl.com/e1)

<sup>22</sup> [www.cabeurl.com/db](http://www.cabeurl.com/db)

## Defining deprivation

Deprivation can be defined in terms of income poverty and the deprivation of material goods such as housing, clothing and heat, alongside subjective measures such as how people on a low income feel.<sup>23</sup> Most research in England uses the indices of multiple deprivation (IMD) which combine several indicators, covering a range of economic, social and housing issues, into a single deprivation score.<sup>24</sup> This study used information from the index of multiple deprivation as one criterion for the selection of the case study areas.

## Defining wellbeing

Wellbeing is a term that is used interchangeably with quality of life, happiness and satisfaction. This study used the World Health Organisation's definition of wellbeing: '*health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity*'.<sup>25</sup>

In addition, this study drew on the work of McAllister which recognises the need for both objective and subjective measures of wellbeing.<sup>26</sup> This defines the main areas of wellbeing as:

- physical health
- income and wealth
- relationships
- meaningful work and leisure
- personal stability
- lack of depression.

The study focused on physical and mental health, relationships and meaningful leisure, as these are the areas known to have a relationship with access to and use of green space.

## Defining ethnicity

Key characteristics of ethnicity are a sense of belonging and a shared history and cultural knowledge. An ethnic group is defined by Bhikhu Parekh in *The future of multi-ethnic Britain* as:

*'A group of people who share common historical experiences, a cluster of cultural beliefs and practices, a broad collective consciousness of belonging together, and see themselves and are seen by others as more or less distinct.'*<sup>27</sup>

Ethnicity is more difficult to categorise than deprivation.<sup>28</sup> It has a number of ingredients. It may include a shared religion or language, but it may not. There appears to be little consensus on appropriate terms to use when describing different groups of people that originate from different parts of the world.<sup>29</sup> This study's literature review found that various categorisations of ethnic group were used across different research studies. Most typically it was the 2001 census's 15 categories of ethnicity.

This report uses the terminology 'black and minority ethnic people' but wherever possible it identifies the specific ethnic group, for instance Bangladeshi or African-Caribbean, to which the research is referring. It is recognised that this is not perfect – ethnicity is dynamic, open and fluid, constantly undergoing adaptation and change.<sup>30</sup>

Ethnicity was self-reported in our study's survey. Interviewees were asked which ethnic group they belonged to. The survey was flexible. Interviewees could name another ethnic group if they felt the categories of ethnicity used were unsuitable.

23 *Poverty and ethnicity in the UK*, a report for the Joseph Rowntree Foundation, Platts, 2006 [www.cabeurl.com/cl](http://www.cabeurl.com/cl)

24 From seven domains of deprivation: income, employment, health, education, housing, living environment and crime.

25 [www.cabeurl.com/dd](http://www.cabeurl.com/dd)

26 *Wellbeing concepts and challenges: discussion paper*, McAllister, F, 2005.

27 *The future of multi-ethnic Britain*, Parekh, 2001.

28 The study focuses on ethnicity to allow a wider analysis away from visible physical difference. For more discussion on the concepts of race and ethnicity see *The new countryside?* Neal and Agyeman, 2006.

29 *Ethnic communities and green spaces: guidance for green space managers*, Black Environment Network, 2005.

30  *Ethnicity, race and health in multicultural societies: foundations for better epidemiology, public health and health care*, Bhopal, 2007.

## 2 Literature and project review: health, ethnicity and inequality

To date, most of the research on race and ethnicity and access to green space has focused on rural contexts.<sup>31</sup>

This study's literature review identified existing research relating to urban green space, deprivation and ethnicity, and how access to green space contributes to wellbeing. It explored around 100 publications and articles, including international research, and over 50 practical projects engaging people in urban green space.<sup>32</sup> The findings from this review helped inform the household survey (chapter 3).

Overall, the review found that there is a lack of in-depth research. Although most black and minority ethnic people in England live in urban areas, there are only a handful of studies offering evidence of the relationship between income inequalities, ethnicity and access to urban green space.<sup>33</sup> Little large-scale research has looked at the relationship between use of urban green space and ethnicity.

### Ethnicity in England

The ethnic profile of the UK is in a rapid state of transition – diversity is increasing. The white British population are generally older and their population growth is generally slower than those of other black and minority ethnic groups.<sup>34</sup> In the last decade there has been a large increase in the percentage of black and minority ethnic young people and they now constitute 20 per cent of under-16-year-olds.<sup>35</sup> The fastest growing groups are black African people and Bangladeshi people – half of the Bangladeshi population is under the age of 21.<sup>36</sup>

Most of the United Kingdom's black and minority ethnic people live in England: in inner-city urban areas and in the most deprived wards. The 44 most deprived local authority areas in England contain proportionally four times more people from black and minority ethnic groups than other areas.<sup>37</sup> Forty-five per cent of the United Kingdom's black and minority ethnic people live in London, and the West Midlands has the second largest proportion at 13 per cent.<sup>38</sup>

Some ethnic groups are more likely to live in certain areas. In particular, Bangladeshi and Pakistani people are the most geographically concentrated and are most likely to live in deprived neighbourhoods.<sup>39</sup> Black Africans are also concentrated, with 83 per cent living in five cities (London, Leeds, Sheffield, Liverpool and Cardiff).<sup>40</sup> The concentration of different groups in specific areas should not be taken to mean that people do not want to move away to more diverse neighbourhoods. Issues such as level of income, unwillingness to move away from family and friends, fear and threat of racism continue to restrict choice.<sup>41</sup>

Housing tenure also varies among different black and minority ethnic groups. Indians and Pakistanis are most likely to own their own home and black Africans are least likely to.<sup>42</sup> Black African households are most likely to rent from a local authority, registered social landlord or private landlord. By contrast, African-Caribbean housing patterns show a more suburban distribution and have a much higher level of home ownership. Bangladeshis are the most disadvantaged in terms of housing.<sup>43</sup>

31 For more information see *The new countryside?* Agyeman and Neal (eds), 2006.

32 Databases searched included; Science direct, Web of knowledge, Google scholar and PubMed. Specific journals searched included Environment and behaviour, Environment and planning, Geoforum, Journal of urban studies and landscape research. A range of search terms were used: for example, poverty/deprivation and ethnicity/race and urban green space.

33 *Enclaves, neighbourhood effects and employment outcomes: ethnic minorities in England and Wales*, Clark and Drinkwater, 2002 and [www.cabeurl.com/cj](http://www.cabeurl.com/cj)

34 [www.cabeurl.com/de](http://www.cabeurl.com/de)

35 [www.cabeurl.com/c2](http://www.cabeurl.com/c2)

36 [www.cabeurl.com/c2](http://www.cabeurl.com/c2)

37 *Enclaves, neighbourhood effects and employment outcomes: ethnic minorities in England and Wales*, Clark and Drinkwater, 2002 and [www.cabeurl.com/cj](http://www.cabeurl.com/cj)

38 [www.cabeurl.com/cl](http://www.cabeurl.com/cl)

39 [www.cabeurl.com/c2](http://www.cabeurl.com/c2) and [www.cabeurl.com/cj](http://www.cabeurl.com/cj)

40 *Black Africans in Great Britain: spatial concentration and segregation*, Daley 2002 [www.cabeurl.com/df](http://www.cabeurl.com/df) provides an interactive map showing the distribution of ethnicities by postcodes in 30 cities in the UK.

41 *Planning for the Future: Housing needs and aspirations of ethnic minority communities*, Housing Corporation, 2008 [www.cabeurl.com/dg](http://www.cabeurl.com/dg)

42 *The new countryside?* Agyeman and Neal (eds), 2006 and *Black Africans in Great Britain: spatial concentration and segregation*, Daley 2002.

43 [www.cabeurl.com/cl](http://www.cabeurl.com/cl)

**Table 1: Ethnicity and poverty in the UK<sup>44</sup>**

Ethnic group	Percentage of UK population	Percentage of ethnic group living in income poverty	Percentage of children by ethnic group living in income poverty
African-Caribbean	1	30	37
Bangladeshi	0.5	65	74
Black African	0.8	45	56
Dual heritage	1.2	32	40
Indian	1.8	25	32
Pakistani	1.3	55	60
White	92	20	25

### Inequalities in income

Although the educational achievements and economic status of different black and minority ethnic groups are improving there are stark differences in the poverty rates, and in the experience of deprivation, according to ethnicity in the UK. All black and minority ethnic groups experience a greater level of deprivation than white British groups.<sup>45</sup>

The poverty rate for Britain's black and minority ethnic groups overall is 40 per cent, double that found among white British people. Nearly all minority ethnic groups are less likely to be in paid employment than white British men and women.<sup>46</sup>

Table 1 shows that rates of poverty are highest for Bangladeshi, Pakistani and black African people, reaching 65 per cent for Bangladeshi people. Furthermore, child poverty rates are highest among Bangladeshi children (74 per cent).

### Inequalities in the provision of urban green space

CABE research, *Urban green nation*, found that in urban areas black and minority ethnic people tend to have access to less local green space and the space they do have is of a poorer quality. Wards that have almost no black and minority residents (less than 2 per cent of ward population) have six times as many parks as wards where more than 40 per cent of the population are people from black and minority ethnic groups. If all types of public green space, not just parks, are looked at, the difference is 11 times.<sup>47</sup>

We recognise that this is intimately related to the circularity of disadvantage but our research found

a difference, by ethnicity, over and above what would be expected for level of income alone.

The literature review for this study identified existing qualitative and quantitative research on inequality in the provision of urban green space, deprivation and ethnicity. Research to date, within the UK and internationally, has largely focused on the quantity (or presence) of green space in relation to deprivation. There is a big gap in research that links the quality of urban green space to deprivation and ethnicity. The review backed up the findings of *Urban green nation* – that people in deprived areas, wherever they live, receive a far worse provision of parks and green spaces than their affluent neighbours.<sup>48</sup>

Research by Mitchell and Popham found associations between income deprivation and the percentage of green space in England. People with less exposure to green space were more likely to suffer from deprivation than those with a greater exposure to green space.<sup>49</sup> In Glasgow, McIntyre et al found income inequalities in accessing green space; wealthier areas had access to more parks, tennis courts and bowling greens, although poorer neighbourhoods had a higher number of play areas.<sup>50</sup>

44 Information from [www.cabeurl.com/cl](http://www.cabeurl.com/cl) and [www.cabeurl.com/d8](http://www.cabeurl.com/d8) Poverty rates calculated after housing costs.

45 [www.cabeurl.com/cl](http://www.cabeurl.com/cl)

46 *An anatomy of economic inequality in the UK – summary*, Report of the National equality panel, Government Equalities Office, 2010.

47 *Urban green nation: Building the evidence base*, CABE, 2010 [www.cabeurl.com/cf](http://www.cabeurl.com/cf)

48 *Urban green nation: Building the evidence base*, CABE, 2010 [www.cabeurl.com/cf](http://www.cabeurl.com/cf)

49 *Effect of exposure to natural environment on health inequalities: an observational population study*, Mitchell, R and Popham, F, *The Lancet*: 372, 2008.

50 *Do poorer people have poorer access to local resources and facilities? The distribution of local resources by area deprivation in Glasgow, Scotland*, McIntyre et al, *Social science and medicine*: 67: 900-14, 2008.

*Urban green nation* explored access to green space and type of space available. This showed that provision of play parks was relatively better in deprived areas across urban England. Suburban areas generally had a bigger quantity of large parks and green spaces.<sup>51</sup>

Our literature review found only one study objectively assessing access to green space by ethnicity in the UK. Comber et al analysed access to green space in Leicester using Natural England's accessible natural greenspace standard guidelines (ANGSt).<sup>52</sup> This found inequalities in proximity to green space by ethnicity, with Indian, Hindu and Sikh groups having significantly less access to green space and Muslim groups greater than expected access.<sup>53</sup> However, proximity to green space does necessarily equate with access to, and active use of, green space.

There is evidence from several qualitative studies of the relationship between poorer-quality green space, ethnicity and deprivation. For instance, research from Ling Wong shows black and minority ethnic people report higher levels of dissatisfaction with neighbourhood environments.<sup>54</sup> Powell and Rishbeth report that black and minority ethnic group interviewees perceived their local neighbourhood open space as neglected, offering poorer facilities and with poorer general maintenance.<sup>55</sup>

*Urban green nation* analysed levels of neighbourhood satisfaction by ethnicity. Half of residents in wards with more than 40 per cent of their population from black or minority ethnic groups are satisfied, compared with 70 per cent in wards with fewer than 2 per cent.<sup>56</sup>

Outside the UK, relevant (English language) research looking at the provision of urban green spaces in relationship to ethnicity and deprivation appears to be restricted to several studies from America and Australia. This research should be viewed cautiously since the results are context specific; geographical patterns of where people live according to ethnicity and income vary considerably between countries, as well as the type and quality of green space available.

Definition of green space also differs, with some studies aggregating green space with other recreational facilities. However, despite these caveats, the international literature does support the same pattern of findings, with inequalities according to income and ethnicity evident in the quantity of green space people can access.

Appendix 1 sets out the results of the review of international research.

### Inequalities in health

Some ethnic groups report worse health. The Health Survey for England in 2004 found that Bangladeshi and Pakistani people and African-Caribbean women are more likely to report bad or very bad health in comparison to the general population. Pakistani women and Bangladeshi men were more likely than those in the general population to report a limiting longstanding illness.<sup>57</sup> Other research suggests specific ethnic groups suffer from specific health problems. For instance, African-Caribbean men suffer disproportionately from high blood pressure and strokes.<sup>58</sup>

Research by Griew found evidence of relationships between health inequalities and ethnicity in the UK. Black and minority ethnic children in a deprived area of Brent, London, were found to be less active than other (mostly white children) elsewhere of similar socio-economic status. This study suggests ethnicity is having a greater impact than income on physical activity patterns in children. Girls were significantly less active than boys across the whole sample, and Asian girls significantly less active than girls from other backgrounds.<sup>59</sup>

51 *Urban green nation: Building the evidence base*, CABE, 2010  
[www.cabeurl.com/cf](http://www.cabeurl.com/cf)

52 ANGSt is Natural England's accessible natural green space standard which sets benchmarks for ensuring access to spaces near to where people live [www.cabeurl.com/am](http://www.cabeurl.com/am)

53 *Using a GIS-based network analysis to determine urban greenspace accessibility for different ethnic and religious groups*, Comber et al, 2008, *Landscape and urban planning*, 86: 103–114.

54 *Culture, heritage and access to open spaces*, Ling Wong, Judy, 2007.

55 *Flexibility in place and meanings of place among first generation migrants*, Powell and Rishbeth (unpublished paper).

56 *Urban green nation: Building the evidence base*, CABE, 2010  
[www.cabeurl.com/cf](http://www.cabeurl.com/cf)

57 [www.cabeurl.com/c4](http://www.cabeurl.com/c4)

58 *Ethnic minorities in Britain: Short change, systematic indifference and sustainable development*, Agyeman, *Journal of environmental policy and planning*, 3: 15–30, 2001.

59 *To what extent do ethnicity and the built environment influence physical activity from a deprived area in London?* Griew, 2008.

## The health and wellbeing benefits of access to green space

This study set out to understand how the quality of urban green space is important and significant to people's health and wellbeing and how this can be used to mitigate inequalities in urban areas. To inform the questions asked in the household survey around health and wellbeing (chapter 3), the literature review explored existing relevant evidence in this area.

Research by Campbell et al identifies neighbourhood quality as an overall indicator of quality of life in England. The availability of parks and green spaces, alongside neighbourhood appearance and feeling safe were found to be key factors that contribute to an individual's quality of life. The study does not report any differences by socio-economic status.<sup>60</sup>

Our literature review did not find any specific studies that objectively evaluated the wellbeing of different ethnicities in relation to green space. However, the literature on health inequalities and access to green space is more developed.<sup>61</sup> Overall, there is a positive relationship between health and green space (presence and access) but causal evidence is still lacking.

## Physical and mental health

Important recent research by Mitchell and Popham shows that the presence of green space is associated with reduced mortality regardless of income level – indicating the role of green space in helping to reduce health inequalities between rich and poor. Their study explores the relationship between green space and mortality rates (all causes) and specific mortality rates (for circulatory disease, lung cancer and intentional self-harm) across four income groups.

The poorest income group was found to benefit the most from proximity to green space in terms of reduced mortality, although the nature of any cause and effect relationship could not be established by the study. The negative relationship between access to green space (defined by proximity rather than use) and poor health was particularly strong for circulatory diseases (cardio-vascular) where stress and lack of physical activity may have causal roles.<sup>62</sup>

In an earlier study, Mitchell and Popham found lower-income suburbs in England with a higher percentage of green space also had poorer health. The impact of proximity to green space was reduced here, suggesting quality as well as quantity of green space influences the level of benefit to health.<sup>63</sup>

Similar epidemiological research in the Netherlands has found systematic links between health and green space at large population levels. Three studies found positive relationships between health (physical and mental) and the percentage of, and proximity to, green space.<sup>64</sup> For instance, Maas et al found an association between green space and reduced risk for 15 out of 24 diseases examined, and particularly in relation to anxiety, depression and respiratory disease.<sup>65</sup>

Green space has been linked with environments that are both more walkable and more playable, with aesthetics and street connectivity influencing patterns of use.<sup>66</sup> Physical activity plays a key role in the prevention of specific diseases that include cardio-vascular disease, depression and obesity.

Rodgers and Lyons found the prevalence of obesity-related chronic disease was lower in deprived areas that they assessed as more walkable, but not in more affluent areas.<sup>67</sup> Rodgers and Lyons reinforce findings from Mitchell and Popham in showing that green space has greater health benefits within the poorest communities. A landmark study from

60 *Measuring quality of life: Does local environmental quality matter?* Campbell et al, 2007.

61 *Urban green nation* found small, significant effects (but marginal) between green space quantity and proximity (including private gardens) in reducing the incidence of 'limiting long term illness'. Valuing parks or nature had a stronger beneficial effect [www.cabeurl.com/cf](http://www.cabeurl.com/cf)

62 *Effect of exposure to natural environment on health inequalities: an observational population study*, Mitchell, R and Popham, F, *The Lancet*: 372, 2008.

63 *Greenspace, urbanity and health: relationships in England*, Mitchell, R and Popham, F, *Journal of epidemiology and community health*, 61: 681-683, 2007.

64 See bibliography for de Vries 2003, Maas et al 2006, Maas et al 2008.

65 *Morbidity is related to a green living environment*, Maas et al, *Journal of epidemiology and community health*, 2009.

66 See bibliography for Owen et al 2004, Nasar 2008, Davison and Lawson 2006.

67 *Does the built environment's walkability help determine health?*

Rodgers and Lyons, 2008.

Japan, shows a link between access to walkable green space and longevity.<sup>68</sup> Green space has also been linked with reduced obesity in children and young people in a large study in America.<sup>69</sup>

Several studies in our literature review looked at the value of green space for psychological restoration such as recovery from fatigue and stress. There is now considerable evidence that contact with nature can promote improved mood, improved attention, reduced stress and anxiety and reduced severity of attention deficit hyperactivity disorder symptoms in children.<sup>70</sup> Within deprived communities in Chicago, research has consistently shown the benefit of green space to cognitive restoration, self-discipline, reduced aggression and reduced crime.<sup>71</sup>

The quantity of green space available is important. Maas et al found less green space in people's living environment coincided with feelings of loneliness and a perceived shortage of social support.<sup>72</sup> Community open space and natural settings have been found to enhance social ties and sense of community: first, in older adults; second, in residents of American urban communities; and third, in residents of a large public housing development in Chicago.<sup>73</sup>

There is evidence, then, of how urban green space impacts on quality of life through improved health, with key benefits including stress reduction and improved physical activity. How urban green space contributes to quality of life at the level of the local neighbourhood environment is far less well understood.

### Ethnicity and the experience and use of urban green space

Our literature review looked at research into the experiences, perception and use of urban green space by black and minority ethnic people.

Appendix 2 sets out the main research studies in the UK exploring the experience and use of green space among different ethnic groups and includes information on the study methodology and their sample size. Most of this literature confirmed that black and minority ethnic groups mainly access nature in urban contexts – because this is the space that is local to their homes.

The experience of nature for its own sake does not appear to differ substantially across different ethnicities. Regardless of ethnicity, the experience of nature is restorative and associated with improved emotional wellbeing. For instance, Askins found recreation in the countryside is as much a part of black and minority ethnic 'culture' as white British culture, but access was inhibited by barriers such as feelings of alienation or lack of public transport.<sup>74</sup>

### Perceptions of safety in green space

The main mechanism known to influence people's usage of open space, across all ethnic groups, and therefore to impact indirectly on health, is perceptions of personal safety. Maas et al have recently shown that a greater quantity of green space in people's living environment is associated with enhanced feelings of social safety, except in enclosed green spaces in urban areas, where it is associated with reduced safety.<sup>75</sup>

Ling Wong suggests that, owing to fear of crime, black and minority ethnic groups experience disproportionately more ill health consequences resulting from isolation and sedentary lives.<sup>76</sup>

Research by Ravenscroft and Markwell found public parks in Reading were more accessible to black and minority ethnic young people than other types of leisure facility but that accessibility is highly localised and unevenly distributed. Neighbourhood parks were perceived as being most important by study participants, but were also perceived to be more racially segregated. Lower levels of satisfaction were associated with these neighbourhood parks,

68 [www.cabieurl.com/e2](http://www.cabieurl.com/e2)

69 *Green neighbourhoods, food retail and childhood overweight: differences by population density*, Liu et al, American journal of health promotion, 21 (4), 317-25, 2007.

70 See bibliography for Hartig et al 2003, van den Berg et al 2003 Ottosson and Grahn 2005, Ulrich et al 1991, Grahn and Stigsdotter 2003, Maas et al 2008, Faber Taylor and Kuo, 2009.

71 See bibliography for Kuo 2001, Faber Taylor et al 2002, Kuo and Sullivan, 2001a and Kuo and Sullivan, 2001b.

72 *Social contacts as a possible mechanism behind the relation between green space and health*, Maas et al, Health and place, vol 15 (2): 586-595, 2009.

73 See bibliography for Kweon et al 1998, Sullivan et al 2004, Kim and Kaplan 2004, Sullivan et al 2004.

74 *Visible communities' use and perceptions of the North York Moors and Peak District National Parks: A policy guidance document for National Parks Authorities*, Askins, 2004.

75 *Is green space in the living environment associated with people's feelings of social safety?* Maas et al, 2009, Environment and planning A, Vol 41 (7), 1763-1777.

76 *Culture, heritage and access to open spaces*, Ling Wong, 2007.

in particular among young black people, reflecting concerns about personal safety. This study suggests that, rather than facilitating inclusion, parks can exacerbate exclusion and isolation.<sup>77</sup>

A range of studies focusing on the experiences of black and minority ethnic groups highlighted specific barriers to accessing urban green space. For instance:

- experience of racism and anxiety in teenagers who report parks and playgrounds as the least safe urban environment<sup>78</sup>
- fear of bullying, restricting access to play<sup>79</sup>
- fear of dogs, particularly among African-Caribbean and Asian groups in one study<sup>80</sup>
- lack of time and resources (including access to public transport), leading to some groups staying close to home<sup>81</sup>
- issues of exclusion arising from the domination of urban green space by other groups of people.<sup>82</sup>

Our household survey (see chapter 3) looks in more detail at the relationship between perceptions of safety and use of green space.

### Preferences for green space

Everybody, regardless of their ethnicity, values spaces that are of a high quality and are well managed and maintained. For instance, Rishbeth found that quality of maintenance and management of a garden or park were found to be more directly important than multicultural design.<sup>83</sup> But some authors have suggested that the aesthetic response to public open space is different among different ethnic groups: for example, the preference for brightly lit fountains popular in parks in Pakistan or the trend for electronic music broadcasts in Chinese parks, which contrast with a UK-based landscape aesthetic.<sup>84</sup> Rishbeth found Asian and African research participants were less likely to be attracted to 'wildness' compared with white British participants – suggesting wildness may be perceived as a barrier to access for some people.<sup>85</sup>

Thus, there is some evidence of cultural differences in the experience of urban landscapes, although the evidence is by no means conclusive. This issue does need further research.

### Use of green space for socialising and physical activity

The social aspects of nature do appear to differ by people's ethnicity. Several studies have found that the social use of parks by black and minority ethnic people tends to be in large family or friendship groups. Research undertaken in rural contexts has found that many groups, particularly Asian people, connect to the landscape through food and picnics.<sup>86</sup> For instance, Edwards and Weldon found that use of rural nature was perceived as offering greater opportunities for family gatherings and social bonding in black and minority ethnic groups than for white groups.<sup>87</sup>

Rishbeth found distinctive patterns of use among different black and minority ethnic respondents. Asian and African study participants were significantly less likely to use a park for exercise in comparison to white British.<sup>88</sup> A study by Rowe found black and other ethnic groups were much less likely to participate in sport in a natural setting.<sup>89</sup>

There is some relevant international research. For instance, research in America found that white park users were more likely to value open spaces for their naturalistic qualities, in comparison to Hispanic and African Americans, who valued the social opportunities more.<sup>90</sup> Research by Gobster found distinctive patterns of physical and social use among different minority ethnic groups in Chicago.<sup>91</sup>

<sup>77</sup> *Ethnicity and the integration and exclusion of young people through urban park and recreation provision*, Ravenscroft and Markwell, Managing leisure 5: 135-150, 2000.

<sup>78</sup> See bibliography for Madge 1997, Burgess et al 1988, Rishbeth 2000, Ravenscroft and Markwell 2000.

<sup>79</sup> *Pakistani teenagers' use of public open space in Sheffield*, Woolley and Amin, Managing leisure 4:156-167, 1999.

<sup>80</sup> *Public parks and the geography of fear*, Madge, 1997.

<sup>81</sup> *Ethnic minority groups and the design of public open space: an inclusive landscape?* Rishbeth, 2001, Landscape research, 26 (4): 351 – 366.

<sup>82</sup> See bibliography for Rishbeth 2004 and Amin 2002.

<sup>83</sup> *Ethno-cultural representation in the urban landscape*, Rishbeth, 2004, Journal of urban design, 9 (3): 311–333.

<sup>84</sup> *Ethnic minority groups and the design of public open space: an inclusive landscape?* Rishbeth, 2001, Landscape research, 26 (4): 351 – 366.

<sup>85</sup> *Ethno-cultural representation in the urban landscape*, Rishbeth, 2004, Journal of urban design, 9 (3): 311–333.

<sup>86</sup> See bibliography for Worpole and Greenhalgh 1995 and Burgess et al 1988.

<sup>87</sup> *Race equality and the Forestry Commission*, Edwards and Weldon 2006.

<sup>88</sup> *Ethno-cultural representation in the urban landscape*, Rishbeth, 2004, Journal of urban design, 9 (3): 311–333.

<sup>89</sup> *Social inclusion in sport: the social landscape of sport – recognising the challenge and realising the potential*, Rowe, 2001.

<sup>90</sup> *Urban form and social context: cultural differentiation in the use of parks*, Loukaitou-Sideris, 1995, Journal of planning education and research, 14: 89-154.

<sup>91</sup> *Managing urban parks for a racially and ethnically diverse clientele*, Gobster, 2002, Leisure services 24: 143-159.

Our household survey included questions on use of parks and asked people about the types of activity they use their local green spaces for (chapter 3).

Our literature review found very little research on how different minority ethnic groups, of different ages, use green spaces. Woolley and Amin showed parks were frequently used by Pakistani teenagers in Sheffield, with neighbourhood parks most valued. The main motivation for visiting was in order to 'be with friends' (48 per cent) followed by a 'good atmosphere' (20 per cent). The main physical activity was playing cricket or football. Barriers to visiting local open space included 'nothing to do', lack of local open spaces, lack of time and safety.<sup>92</sup>

Elsewhere, research in young people has shown these findings are also common to white British teenagers living in deprived communities.<sup>93</sup> Age would therefore seem to have more bearing in this context than ethnicity.

### Urban green space and social inclusion

Our literature review identified research into the way the urban environment, and green spaces specifically, promote opportunities for cultural cohesion, social integration and identity development that were greater than those provided by 'far-away nature'.

#### Social integration

A theme across the existing research is the ability of urban space to promote social integration.<sup>94</sup> Regular encounters with different people can be seen as the beginnings of a community. Madanipour cites examples across the UK and Europe where open space initiatives have reduced tensions among diverse and disadvantaged communities.<sup>95</sup>

Research by Dines et al explores the opportunities that public open spaces offer for different ethnic communities to engage in public life, finding that public outdoor spaces were mostly valued as social arenas. Residential streets, the local park or the local market are valued for both casual and organised encounters and are often a key element in people's attachment to and decision to stay in a neighbourhood. The vibrancy of streets and markets is uplifting and associated with curiosity and novelty.<sup>96</sup>

Nostalgia and opportunities to reminisce formed a strong theme in the research reviewed, with the

experience of nostalgia found to be particularly strong in first-generation migrants. Particular factors that trigger nostalgia are specific plants and the opportunities (especially for Asian women) in parks for social gatherings.<sup>97</sup> Topia-Kelly highlights gardening as particularly important in connecting first-generation Asian women with the past.<sup>98</sup>

The ability of landscape to trigger memories of something familiar helps facilitate a sense of belonging. Some research studies have looked at the features of nature that may hold importance for some ethnic groups. For instance, Topia-Kelly found that English roses, fuchsias, specific vegetables and the colour of the soil were features that resonated with the Asian women studied.<sup>99</sup> Ling Wong notes that plants can stimulate a sense of continuity between different cultures, highlighting the impact of plants from overseas on landscapes within Britain.<sup>100</sup>

Powell and Rishbeth found first-generation migrants' experience of negotiating the urban landscape was a key aspect in the process of acclimatisation and assimilation. Through active interaction with the urban landscape, migrants are forced to learn essential new skills (for instance negotiating public transport and shops).<sup>101</sup>

Rishbeth draws an important distinction between the value of further-away urban landscapes, which offer opportunities to experiment or test out new life options and identities, and the local landscape which helps create feelings of belonging and opportunities for interaction.<sup>102</sup>

92 *Pakistani teenagers' use of public open space in Sheffield*, Woolley and Amin, Managing leisure 4: 156-167, 1999.

93 *Free range teenagers: the role of wild adventure space in young people's lives*, Ward Thompson et al 2006.

94 See bibliography for Madanipour 2004, Powell and Rishbeth (unpublished draft), Dines et al 2006 and Burgess et al 1988.

95 *Marginal public spaces in European cities*, Madanipour 2004, Journal of urban design: 9 (3), 276-286.

96 *Public spaces and social relations in East London*, Dines et al, 2006.

97 See bibliography for Powell and Rishbeth (unpublished draft), Topia-Kelly, 2004 and Burgess et al 1988.

98 *Landscape, race and memory: biographical mapping of the routes of British Asian landscape values*, Topia-Kelly, 2004, Landscape research: 29 (3), 277-292.

99 *Landscape, race and memory: biographical mapping of the routes of British Asian landscape values*, Topia-Kelly, 2004, Landscape research: 29 (3), 277-292.

100 *Culture, heritage and access to open spaces*, Ling Wong, 2007.

101 *Flexibility in place and meanings of place among first generation migrants*, Powell and Rishbeth (unpublished draft)

102 *Ethno-cultural representation in the urban landscape*, Rishbeth, 2004, Journal of urban design, 9 (3): 311-333.

Powell and Rishbeth stress 'being away' in the context of green space is particularly important, related to the need for anonymity among first-generation migrants. The immediate public neighbourhood can place pressures of obligation on certain people such as expectations of respectability, hospitality and service, from which urban green space can offer temporary escape.<sup>103</sup>

### Development of tolerance

At present there is contradictory evidence as to whether open space helps or confounds the process of developing tolerance, and more research is needed in this area.

Amin, reporting on deprived neighbourhoods in the north of England, stresses the limitations of public space in generating 'intercultural dialogue' as compared to other places (such as work, school, leisure) and found domination of the street by different ethnic groups at different times of the day worsened racial tensions.<sup>104</sup>

This is challenged by Dines et al, in their study of Newham, East London, which found streets promoted ethnic interaction and tolerance.<sup>105</sup>

### Projects engaging communities in urban green space

In addition to the existing literature, over 50 recent projects were reviewed in order to provide insight into how people experience green space, what specific attributes of urban green space are valued, and the benefits from, and barriers to, accessing urban green space.<sup>106</sup>

These projects were chosen because they aimed, in different ways, to engage deprived communities or different ethnicities with their local urban green space. The review explored how the projects were facilitated and how the quality of green space was evaluated. Appendix 3 sets out the projects reviewed.<sup>107</sup>

Methods of community engagement used by the projects included:

- events and activities such as urban farming and competitions to draw in the local community
- creative play and audio-visual methods to engage both the young and older people

- revealing a 'hidden story' behind the landscape that resonates culturally or historically
- community consultation through events on-site, design workshops, discussion groups, or visits to quality green spaces.

Urban farming and food was a key method of engagement within the projects that were reviewed.

Some project managers used the Black Environment Network (BEN) to facilitate consultation with different communities. Two projects used CABE's *Spaceshaper* tool to engage with communities.

**'These park improvements have improved our quality of life. Where we were scared to walk in the park in fear of being robbed due to overgrown trees and hedges, we can now sit on comfortable seats and enjoy the open space and the flowers without being in fear'**

*Local resident, Leyton Manor Park  
(Groundwork East London)*

Several projects reported that engaging with black and minority ethnic women was an effective way to also engage men and young people. This was particularly the case with health initiatives, where Asian women, for instance, were seen as having authority in this field. Another project reported that late afternoon was a good time to carry out door-to-door surveys, when children and teenagers were at home and able, if needed, to translate for their parents.

Most projects documented the benefits and outcomes for areas and individual participants. These include:

- promotion of the use of, and access to, local green space
- improved community cohesion and a reduction in anti-social behaviour

<sup>103</sup> *Flexibility in place and meanings of place among first generation migrants*, Powell and Rishbeth (unpublished draft)

<sup>104</sup> *Ethnicity and the multi-cultural city: Living with diversity*, Amin, 2002.

<sup>105</sup> *Public spaces and social relations in East London*, Dines et al, 2006.

<sup>106</sup> Projects submitted by research advisory group members, from organisations directly contacted by OPENspace and via web searches. Only projects taking place in urban and English areas were reviewed. A summary of the projects reviewed is in appendix 3.

<sup>107</sup> The data is self-reported, and therefore subjective. Future research could collect objective data on health and access to, and quantity of, green space.

- improved mental health and opportunity for relaxation, self-expression, release of energy, fun and enjoyment
- improved physical health and motivation
- increased skills (for example in horticulture) and confidence
- the promotion of sustainability such as the reduction of car use
- improvements in the quality of specific spaces.

**'I went to celebrations, festivals – anywhere where I knew that people were gathering. A lot of persuading and convincing was needed and I had to make a great many visits...it was a question of getting on friendly terms with people and gradually building up trust'.**

*Asian community walking facilitator*

Some projects did experience barriers in engaging people. Barriers included a lack of funding, and the need to maintain the energy and motivation to engage specific communities and sustain this involvement. Furthermore, there was a lack of trust in communities where changes have been promised in the past, but not delivered. A minority of projects reported problems with language barriers and a lack of confidence within some participants.

### Conclusion and research gaps

The ethnic profile of our urban areas is changing. Most of the UK's black and minority ethnic communities live in England, in inner urban areas and in the most deprived wards. Poverty rates are highest in black and minority communities, double that found among white people, and some minority ethnic groups report worse health.

At the same time, in urban areas, wards with populations of over 40 per cent black and minority ethnic people can have up to 11 times less general green space than wards with almost no black and minority ethnic residents. And the green space that they do have is of a poorer quality.

Yet it is the most deprived neighbourhoods that will benefit the most from access (and proximity) to green space. Our literature review found that

access to, and use of, green space in urban areas promotes health and wellbeing. Furthermore, existing research shows how green space plays a role in easing racial tensions and bringing diverse groups together, for instance to play football or cricket, and promoting integration by providing space for organised and casual encounters with neighbours and different ethnic groups.

Regardless of ethnicity, the experience of nature is restorative and associated with improved emotional wellbeing. Everybody values good-quality green space that is well managed and maintained. However, the simple presence of green space within areas does not necessarily mean it will be well used. One of the main influences on an individual's use of green space is how safe they feel. Research suggests that black and minority ethnic people are more likely to feel unsafe and this impacts on their level of use. Our household survey explores this in more detail.

The social aspects of access to green space do appear to differ by ethnicity. Existing research, both within the UK and internationally, has found distinctive patterns of use among different black and minority ethnic people. However, a person's age does seem to be more significant than ethnic group, with young people more likely to report common reasons for visiting, and common barriers to use. Our household survey asked people about the ways they use their local green spaces.

Overall the literature review found a lack of quantitative research using large sample sizes. Instead, most of the research reviewed took a case study approach – using qualitative methods in small samples, focusing on adults rather than on children.

There is a positive relationship between health and green space but causal evidence is still lacking. Our literature review did not find any studies that objectively evaluated the wellbeing of different ethnicities in relation to green space.

More research is needed on the barriers to accessing green spaces that are at play well before someone does or does not use a specific space. Finally, our review found little research on patterns of physical behaviour and how they differ among different ethnic groups.

### **3 The household survey: green space, ethnicity and health in six communities**

**We interviewed over 500 people in the six case study areas to explore the relationship between the quality of their local green spaces, use of these spaces and their health and wellbeing.**

**The survey did this in two ways. First, it asked interviewees how important they thought access to green space is in relation to other factors in making an area ‘a good place to live’.**

**Second, interviewees were asked about their health, their use of green space, the quality of their local green spaces and how improvements to their local spaces would affect their use, and levels of physical activity. This was aimed at gaining insight into how improvements in the quality of local green space can impact on people’s use of, and levels of activity within, these spaces, and consequently their health and wellbeing.**

**The survey was unique in this approach. To date no other English research project of this scale has explored these issues. In addition, there is no precedent for exploring how improving green space provision might result in changing behaviours.**

This chapter is divided into four sections:

1. An overview of the people interviewed – including their ethnicity, income, tenure and self-reported assessment of their health and wellbeing.
2. The role of green space in making an area a ‘good place to live’ – as compared to a number of other environmental factors.
3. Use of local green space, by type of space and by ethnicity, and satisfaction with neighbourhood and local green space .
4. Links between green space quality and use and health and wellbeing – including perceptions of safety and changing behaviour.

#### **1. The survey respondents**

The views of 523 people, from white and black and minority ethnic groups, were collected and analysed. Between 85-88 people in each case study location agreed to take part, which was carried out as a computer assisted interview, face-to-face in people’s households. This took around 45 minutes to complete and people received a £5 voucher for taking part.

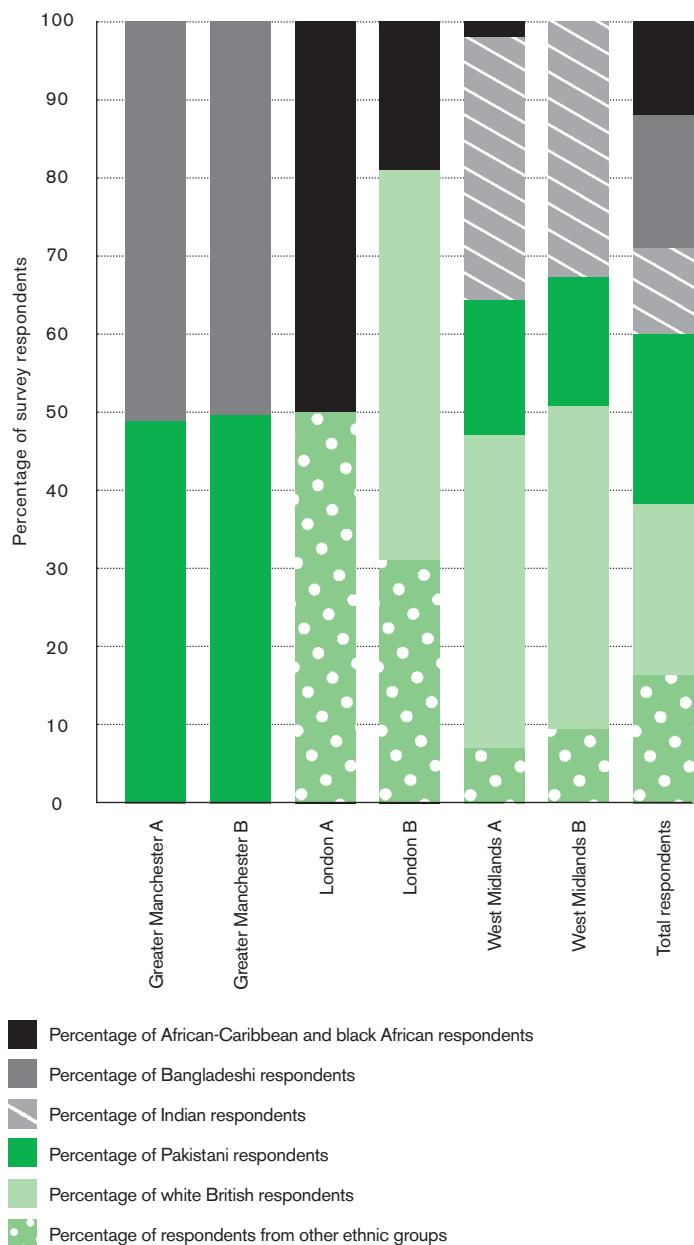
The survey was aimed at a structured sample of people in the case study areas. Each area’s ‘target’ sample was constructed to reflect the ethnicity of local residents. The views of African-Caribbean, Bangladeshi, black African, Indian, Pakistani and white British people were sought. On the whole people were willing to talk to us. Some 68 per cent of the people we asked agreed to take part. Households with children were more likely to agree.

Respondents from different ethnicities were not evenly distributed across the areas; for instance, all Bangladeshi interviewees were from the two Greater Manchester areas.

Figure 2 below sets out the survey respondents by area and by their ethnicity. Ethnicity was self-reported. People were asked which ethnic group they belonged to.

To assist with data analysis, the classification of people’s ethnicity is divided into six groups. African-Caribbean and black African interviewees were combined into one group for analysis. This was a pragmatic solution owing to small study numbers.

**Figure 2: Percentage of survey respondents (by their area of residence and ethnicity)<sup>108</sup>**



The sample was slightly biased towards women (60 per cent) and younger age groups (70 per cent of interviewees were aged between 16 and 44 years old).<sup>109</sup> As the literature review for this study demonstrated, the age profile of black and minority ethnic people is younger than that of the white British population so the age bias was felt to be appropriate.

The case study areas were selected on the basis of their high levels of economic deprivation (see chapter 1 for more information on the areas selected).

Around half of the survey respondents (51 per cent) were not in any form of paid work, and 40 per cent were finding it difficult to cope on current income.

Those finding it most difficult (difficult to very difficult) to cope on their present income were Pakistani people (52 per cent) followed by Indian people (44 per cent), white British (39 per cent), Bangladeshi people (37 per cent), African-Caribbean and black African people (33 per cent) and 'other' black and minority ethnic people (32 per cent).

Housing tenure distribution was mixed among those who rented from a private landlord (24 per cent), home owners (24 per cent) and those living in social housing (21 per cent). Sixteen per cent of the sample were homeowners via shared ownership. Indian interviewees were most likely to own their own home, and other black and minority ethnic people and African-Caribbean and black African people were most likely to rent (private or social housing).

### Self-reported health and wellbeing

Table 2 shows that the percentage of interviewees reporting 'good' or 'very good' health was lower in the study areas than the average recorded for the local authority.<sup>110</sup> This is not unexpected owing to the level of deprivation in the case study areas. However, as table 2 shows, the picture was mixed. In Greater Manchester B (Bangladeshi and Pakistani interviewees) and West Midlands A and B (white British, Indian and Pakistani interviewees) the levels of reported general health were higher.

Indian interviewees reported the highest overall health (88 per cent very good and good) and this was markedly higher than any other ethnic group.

The rate of general health was very low in Greater Manchester A (Bangladeshi and Pakistani interviewees) both compared to other locations within this study and compared to the average for the local authority: 41 per cent as compared to 69 per cent.

<sup>108</sup> People in this group include dual heritage people, Chinese and Turkish people. The grouping of a diverse range of people was a pragmatic solution to small study numbers.

<sup>109</sup> 23 per cent were aged 16-24 years old, 26 per cent aged 25-34, 21 per cent aged 35-44, 16 per cent aged 45-54, 7 per cent aged 55-64 and 6 per cent aged 65 or over.

<sup>110</sup> Compared with Place Survey 2009 data on general health. The Place Survey also collects information about resident satisfaction with neighbourhood quality and local authority services [www.cabeurl.com/dh](http://www.cabeurl.com/dh)

**Table 2: Percentage of respondents reporting that their health is either ‘very good’ or ‘good’**

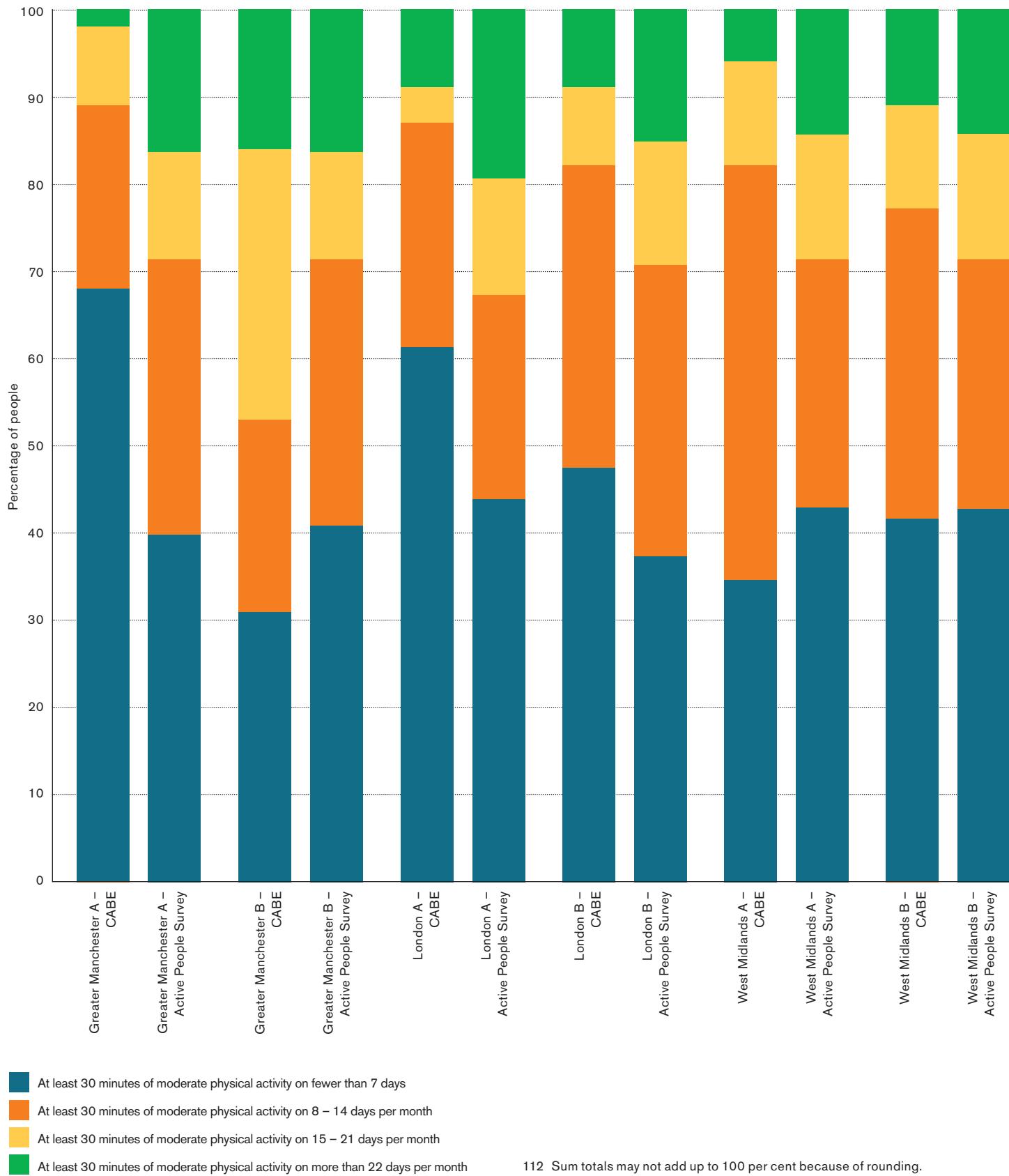
Case study area	CABE data (2009)	Average for local authority (Place Survey data, 2009)
Greater Manchester A	41	69
Greater Manchester B	76	69
London A	61	78
London B	60	83
West Midlands A	85	71
West Midlands B	84	74

Figure 3 sets out levels of physical activity in the areas, against national figures taken from Sport England’s Active People Survey (2005/06) which is a large-scale survey of people’s leisure and physical activity.<sup>111</sup> The London A and Greater Manchester A case studies are much lower than the national averages here and West Midlands A is higher with regard to medium levels of activity (at least 30 minutes of moderate physical activity on 8-14 days per month). The other case studies are spread across a spectrum.

Levels of physical activity were the lowest among black African and African-Caribbean interviewees – 83 per cent reported exercising on less than 7 days per month. Physical activity was highest among Indian interviewees – 12 per cent reported exercising on more than 22 days per month.

The same patterns were found for quality of life, social wellbeing and place attachment, with Indian interviewees scoring high and black African and African-Caribbean and Bangladeshi interviewees the lowest.

**Figure 3: Levels of physical activity undertaken per month: CABE study compared with the Active People Survey (percentage of people)<sup>112</sup>**



## The survey methodology

The household survey asked a series of questions designed to explore the relationship between the health and wellbeing of interviewees, and perceived quality of their local green space and current use of green space. It also explored people's attitudes to improvements to their local green spaces and how this could affect their behaviour – specifically their levels of use and physical activity.

The design of the survey was shaped by our review of the existing literature (see chapter 2) and focus groups (see appendix 4). Interpretation of the survey data was aided by information gathered by audits of environmental quality in the case study areas (see appendix 5).

The survey drew on a combination of questions demonstrated to be reliable in previous research studies, and existing validated scales for health and wellbeing. Wherever it was possible, the survey drew on questions that had been used before to explore the use of green space and perceived quality of green space and neighbourhood.

Information from focus groups, held in four of the six case study locations, was used to construct new questions around green space use and people's likes and dislikes. The focus groups also helped to provide additional background information on the quality of green space provision in the case study areas. Green space was defined by the survey as 'any public space around here that is somewhere grassy and green to walk, sit and play, excluding a private garden'. This definition was informed by discussions within the focus groups in which green space was understood to include parks, grassy areas, hilly places and open spaces, as well as areas such as canal towpaths and sports pitches.

Questions on green space use were taken from national surveys such as Sport England's *Active people survey* and best value performance indicators (BVPI). Questions on neighbourhood satisfaction were drawn from BVPI. Where no English equivalent was available, questions from the *Scottish social attitudes survey* (2009) were used.

There were no precedents in previous research for questions exploring how perceived wellbeing changes in relation to green spaces. This aspect of our survey was approached by a series of

new questions designed to tap into people's aspirations for green space quality and use and the things that are most meaningful to them.

The use of questions replicated from other national surveys enabled comparison of the CABE data with national baselines. *Urban green nation: building the evidence base* sets out more information on national data collection relating to urban green space.<sup>113</sup>

## Measuring health and wellbeing

Questions used in the survey to measure perceptions of health and wellbeing examined a variety of variables to capture information on general health, physical health, self-reported quality of life and wellbeing.

### ▪ Physical health

One question used '*in the past week/month, how many days have you done a total of 30 minutes or more of physical activity, which was enough to raise your breathing rate e.g. getting slightly out of breath?*'<sup>114</sup>

### ▪ General health

One question used '*in general would you say that, for a person of your age, your health is...?* (scale of very good to very poor)<sup>115</sup>

### ▪ Self-reported quality of life

Measured using a five-item scale on satisfaction with life.<sup>116</sup>

### ▪ Social wellbeing

A combination of questions measuring levels of community cohesion, trust, loneliness, attachment to place and sense of belonging.<sup>117</sup>

### ▪ Objective measures and self-reported indicators of wellbeing

Demographic and socio-economic questions asking about level of income, housing, educational attainments, perceived access to, and use of, public services.<sup>118</sup>

113 *Urban green nation: building the evidence base*, CABE, 2010  
[www.cabe.org.uk/cf](http://www.cabe.org.uk/cf)

114 British Heart Foundation National Centre, 2008.

115 General health question used in other relevant research, for example by Maas et al, 2008.

116 See bibliography for Diener et al, 1985. Well used in other research exploring relationship between green space and wellbeing, for instance Sugiyama and Ward Thompson, 2009 and *Scottish environmental attitudes and behaviours survey*, 2008.

117 Measures of community and cohesion taken from the *Scottish social attitudes survey*, 2009 and the University of California *Loneliness scale*.

118 Questions taken from PLUREL [www.plurel.net](http://www.plurel.net)

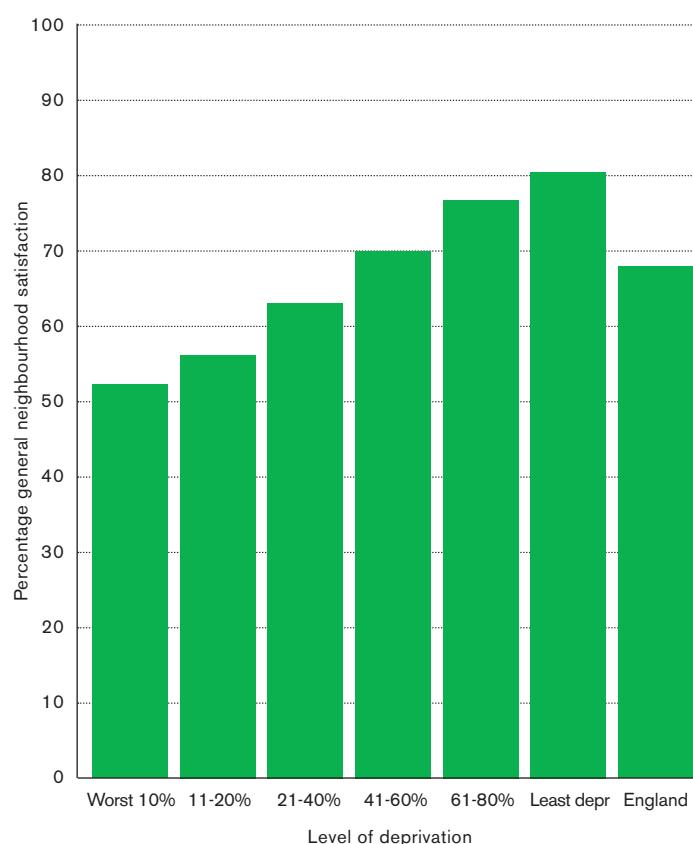
## 2. Understanding the role of green space in making an area a 'good place to live'

*Urban green nation* found a strong link between people's satisfaction with their local parks and open spaces, and their satisfaction with their neighbourhood. If people are satisfied with local parks, they tend to be satisfied with their council. However, in deprived areas, and areas with high black and minority ethnic populations (over 40 per cent of ward population), both neighbourhood satisfaction and satisfaction with parks and open spaces is lower than in more affluent areas.

As figure 4 shows, this difference can be up to 30 per cent between the people living in the most and least affluent areas.

This matters, both for the wellbeing of individual communities and for the way in which local authorities' overall performance is assessed.

**Figure 4: Percentage neighbourhood satisfaction by level of deprivation**



Source: BVPI 2006 survey. Information for urban authorities only.

<sup>119</sup> *Urban green nation: building the evidence base*, C ABE, 2010  
www.cabeurl.com/cf

Satisfaction with neighbourhood is a key national performance indicator (National Indicator 5) and authorities that choose this as part of their local area agreement will need to prioritise improvements.

An area's local green space is a resource to use to mitigate inequalities faced by different communities. The household survey therefore set out to explore the individual influences on resident satisfaction and to understand how people make decisions when considering what makes an area a 'good place to live'. This was to increase knowledge on the specific role of an area's green space, in relation to other services, in shaping areas that people will want to live in.

### Maslow's hierarchy of needs

In the 1940s Abraham Maslow proposed a theory of five levels of needs that humans require fulfilled in order to positively develop and to be satisfied in life.

The bottom tier of needs, the physiological or biological, are those things that people must have in order to survive: for instance, oxygen, food and water. Once these basic needs are satisfied, the second tier of Maslow's hierarchy becomes active – the need for safety and security. An individual progresses through these needs in order. Therefore, when an individual feels safe, the next class of needs become active – the need for love and belonging, and so on and so forth.

The provision of local green space is fundamental in making urban life liveable and our nation's green infrastructure provides valuable basic environmental services such as cleaning the air, storing flood water and ameliorating the heat island effect. The Place Survey shows that almost nine out of 10 people use parks and green spaces in urban areas and they value them; ninety-five per cent of people think it is very or fairly important to have green spaces near to where they live.<sup>119</sup>

Our research provides further evidence that access to local green space, alongside access to housing, health and education, is a basic requirement or need that is fundamental to a good quality of life. Analysis of our survey data also reveals a relationship between use of green space and individual perceptions of safety – those who use green space less also tend to feel less safe in their area.

### The PLUREL methodology

The household survey drew on a questionnaire developed as part of a European Union-funded project entitled PLUREL (Peri-urban Land Use Relationships: Strategies and Sustainability Assessment Tools for Urban – Rural Linkages) and used questions that have been developed as part of this European-wide programme of research.<sup>120</sup>

PLUREL examines how important access to green space is in relation to seven other environmental attributes:

- air quality
- suitability of housing
- area safety and security
- noise pollution
- shopping facilities
- public transport
- waste disposal.

These attributes are considered to be a manageable set of physical environmental factors that are likely to be most pertinent to people's wellbeing and are most relevant in making a neighbourhood a good place to live.<sup>121</sup>

PLUREL developed and piloted its questions across several European countries. It has gathered responses in six European regions

(Greater Manchester, den Hague, Koper (Slovenia), Warsaw, Leipzig and Montpellier), one area in China and in Estonia.

Using PLUREL as its basis, the household survey explored the relative importance of urban green space in relation to the other environmental attributes using a computerised simulated exercise whereby participants are asked to select what would make a good place to live. The simulator presents different scenarios of a 'good' place to live based on three different levels of each attribute: for instance poor, moderate or excellent air quality. Green space access options ranged from a short walk to green space, a long walk to green space, or transport needed to reach green space. Using this method, it is possible to analyse the results of the exercise by ethnicity, level of education or income and location.

This type of analysis is different from conventional preference or rating tasks because people's judgements about what makes a particular area a good place to live are based on a range of attributes in combination, comparable to the way people make choices in real life. For instance, when people are choosing where to live, they weigh up location, type of house, school quality and so on, as part of the same decision, rather than as discrete individual components.<sup>122</sup>

120 [www.plurel.net](http://www.plurel.net)

121 Based on *Sustainable communities indicators* [www.cabeurl.com/do](http://www.cabeurl.com/do) and the *European quality of life survey* [www.cabeurl.com/dp](http://www.cabeurl.com/dp)

122 The National Institute for Health and Clinical Excellence (NICE) has recommended that researchers move to choice methods, such as the method used in our study, for quality of life assessment in medicine and health.

## Results

Overall, area safety and security were considered most important in making an area a good place to live. When all environmental attributes were equal and the safety attribute is varied, 'rare safety problems' was the most preferred scenario across the sample.

Access to green space was ranked sixth in importance and contributed approximately 10 per cent to making the area a good place to live within the context of the other attributes evaluated. Area safety and security contributed 16 per cent and was approximately 1.6 times as important as access to green space.

The differences in the importance of attributes tested were mostly not very great. Figure 5 below summarises the results.

### Results by ethnicity

The role of safety in choosing a place to live varies in importance according to ethnicity. White British interviewees, Indian, Pakistani and other ethnic black and minority ethnic groups rated safety as the most important attribute compared to seven others. Bangladeshi people and black African and African-Caribbean people rated it as the second most important attribute after design and construction of housing.

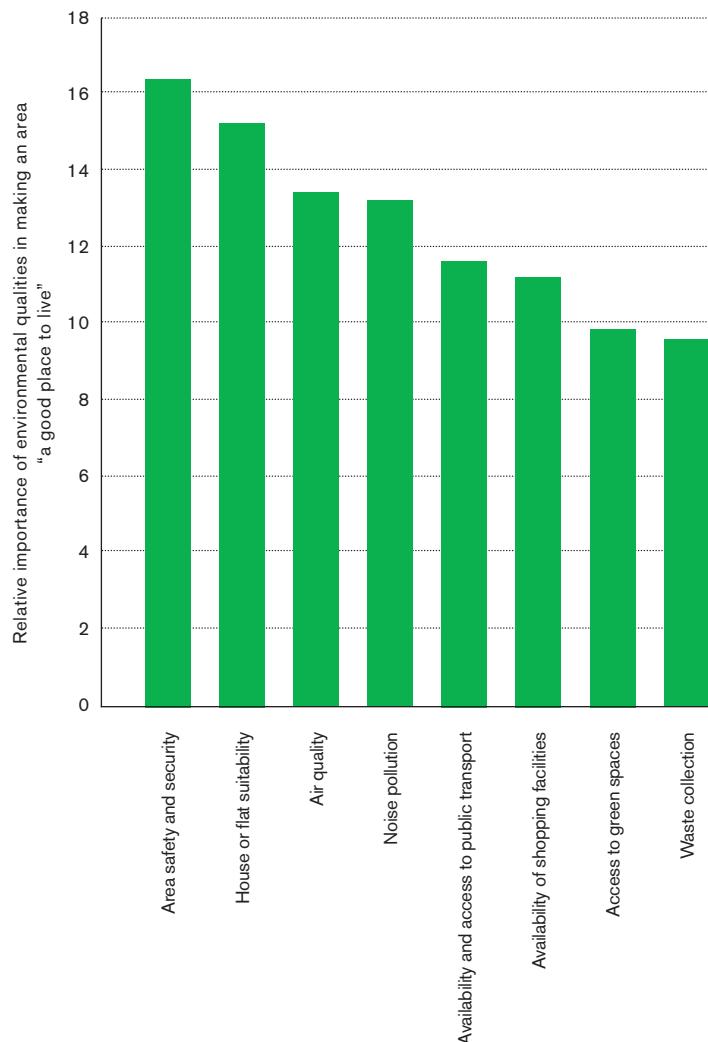
The relative importance of access to green space for a good living environment was similar across all ethnic groups, although importance ratings were slightly higher for white British, Pakistani and Indian interviewees.

### Results by level of physical activity

Those that were more physically active (self-reported) placed access to green space higher in importance than most. This underlines a relationship between physical activity and the value of green space that appears to be more evident in this study's sample than in the wider population of Britain.

Frequency of people's estimated activity levels and frequency of green space use were related to: higher importance of air quality; higher importance of green space but lower importance of noise and lower importance for safety. It is perhaps not surprising that those who use green space more rate this access higher in importance. However, it is of note that they place lower importance on safety.

**Figure 5: Relative importance of the tested environmental qualities in making an area 'a good place to live' (percentage)**



## **Results by level of green space use**

Conversely, those who use green space less often rate safety and noise attributes more highly, and air quality and green space access lower. Although it is not possible to isolate a cause and effect relationship here, it is of note that those who use green space less also place a greater importance on safety. This relates to the literature reviewed in chapter 2 which showed that the main mechanism influencing people's usage of open space is their perception of safety.

## **International comparison**

The results were compared with PLUREL data from other countries. This data incorporates a range of locations, from inner urban to rural, and a wider spectrum of respondents. This is in contrast to this study's narrower focus on deprived areas with a high population of black and minority ethnic people.

Comparison does however reveal similar results.<sup>123</sup> In the wider PLUREL dataset green space is also ranked sixth and the overall average importance of green space also remains relatively constant (around 10 per cent). This is important in indicating that access to green space is a basic and consistent environmental attribute in making an area a good place to live, regardless of who you are or where you live.

## **3. Use of green space and satisfaction with neighbourhood**

The survey asked people which local green spaces they used and how they perceived the quality of these spaces and the quality of their wider neighbourhood.

The public park was the most frequently visited space of all the types of green space included in the survey – recorded at 90 per cent of overall use.<sup>124</sup> The majority of interviewees (78 per cent) visited their nearest space by walking, indicating that it is the local neighbourhood park that is of most significance for people's use of green space.

This also mirrors the results of focus groups that were held in the case study areas to help develop the household survey questions. These groups discussed people's use of local green space and their perception of the quality of these spaces. Here, again, the most frequently mentioned green spaces were parks and, in Greater Manchester B, sports pitches.

Furthermore, in the focus groups, most participants reported going on foot, usually with friends and family – especially young female Pakistani and Bangladeshi women.

However, in locations with a higher quality of park, for instance a Green Flag-awarded park, people reported travelling further. Appendix 4 includes more information on the findings from the focus groups.

The pattern of visiting public parks was the same across all the survey respondents. Significantly, less than one per cent of those living in social housing (21 per cent of the overall sample) reported using the green spaces in the housing estate they lived in.

As figure 6 below shows, these spaces were recorded at only 3 per cent of overall use (this includes people who live in private homes on housing estates), indicating that for the majority of people these spaces are not considered a location to use or visit.

Yet, in England 17 per cent of households are social tenants living in nearly four million homes, up to half whom are likely to be aged under 16.<sup>125</sup> Social landlords are responsible for the significant quantities of green and open spaces that surround these homes. Indeed, in some areas, especially in some parts of London, their green space stock may be equal to or greater than, the amount of green spaces owned and managed by the local authority.

Social landlords therefore have control over a significant green space resource. CABE and the National Housing Federation have set out a practical action plan that identifies 10 priorities to help improve the quality of these spaces. The Neighbourhoods Green partnership, which aims to highlight the importance of green spaces for social housing residents, will work with social landlords to take these forward.<sup>126</sup>

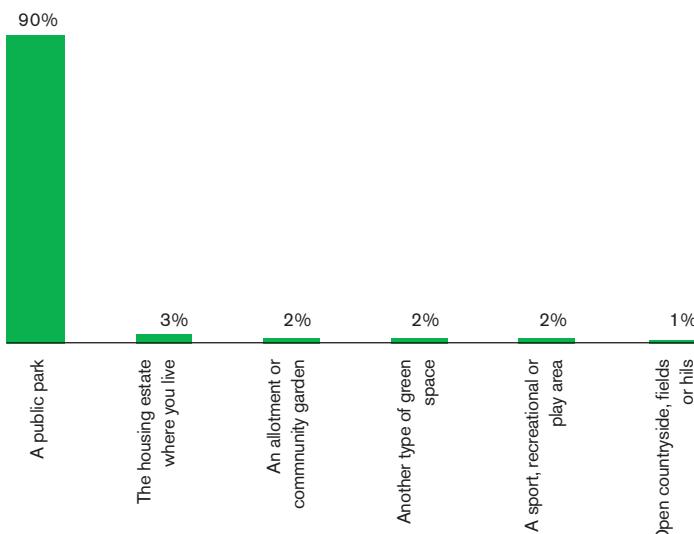
123 It should be remembered that sampling frames are not directly comparable in terms of sample size or targeted populations.

124 The survey also included sports and recreational areas, play areas, green spaces on social housing estates, woodlands, open countryside, green space alongside canals or rivers. Respondents were also able to name another type of green space.

125 8 per cent of social housing is managed by housing associations and 9 per cent by local authorities [www.cabeurl.com/c5](http://www.cabeurl.com/c5) and [www.cabeurl.com/cd](http://www.cabeurl.com/cd)

126 The Partnership is supported by CABE, the National Housing Federation, Natural England, Peabody, Green flag plus partnership, Groundwork UK, Landscape Institute and the Wildlife Trusts. For more information on the action plan [www.cabe.org.uk/social-landlords](http://www.cabe.org.uk/social-landlords)

**Figure 6: Types of local green space used by respondents**



### Green space use by ethnicity

A person's ethnicity was the strongest indicator of their green space use in the survey data. And for all ethnic groups aside from white British and Indian people, general health was the next best predictor of use.

Thus, the frequency and nature of individual green space use was examined in more detail to see if it is possible to determine patterns of difference and similarity between different ethnicities. Analysis of the data shows that there are highly significant differences by ethnicity – with physical activity and social patterns of use generally stronger among black and minority ethnic interviewees.<sup>127</sup>

- take children/grandchildren out
- to be in a place where there are other people
- exercise
- walk the dog
- enjoy entertainment
- enjoy the beauty of the surroundings
- grow things.

### Perceptions of green space quality

Our study found that the levels of quality, and the value, people attach to a particular green space are different according to the circumstances in which they are asked. People tended to be more positive when visiting in person in a group context and less so when discussing a space's characteristics at a distance. Formal environmental audits were undertaken in all of the case study areas to assess the quality of the green spaces within these areas. Thirteen spaces, mainly parks, were audited and the information gathered aided the interpretation of the responses to the household survey. Appendix 5 provides more information on the audits.

People's perceptions of green space on-site were much more positive than in focus groups and more consistent with the ensuing survey data gathered from individuals.

It is possible that being in a green space on a sunny day within a social context influenced the results. Or that focus group opinion can be swayed by the group dynamic. This shows the importance of carrying out on-site assessments with the community, and that value judgements vary according to context.

### Use of green space

Nationally, 48 per cent of people use green spaces at least once a week.<sup>128</sup> In our study levels of green space use for all ethnicities, with the exception of white British, were much lower than the national average. This was expected because of the level of deprivation of the areas studied. Deprived areas in England record the lowest level of green space use.<sup>129</sup>

Survey interviewees were asked to choose from the following options:

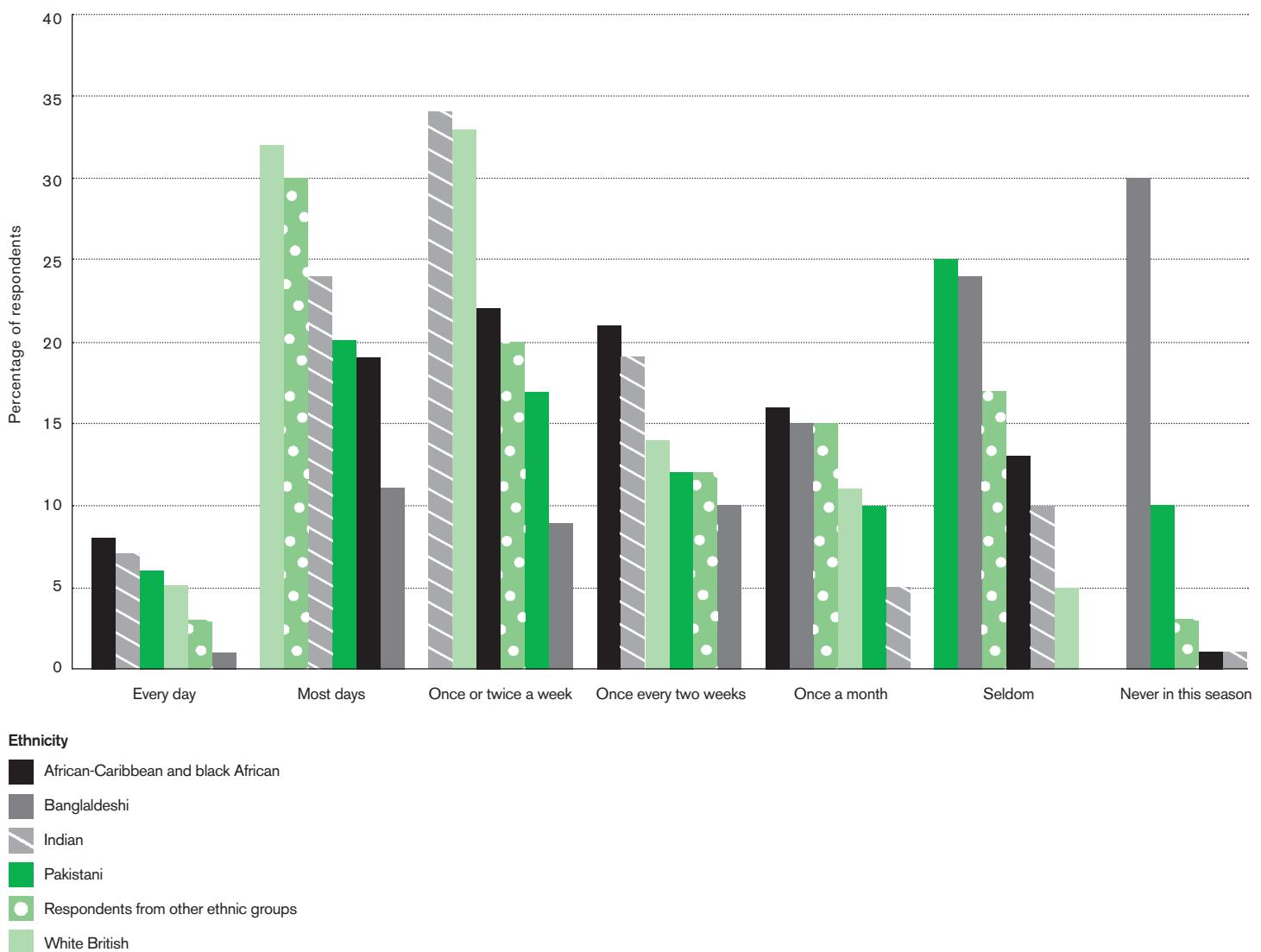
- relax, think and enjoy the peace and quiet
- see wildlife
- get fresh air
- meet friends
- eat and drink
- for a family outing (for instance picnic or barbecue)

<sup>127</sup> As compared to the other options set out in the survey, for instance 'for peace and quiet' or 'to see wildlife'. Interviewees also had the opportunity to state an activity not included in the survey options.

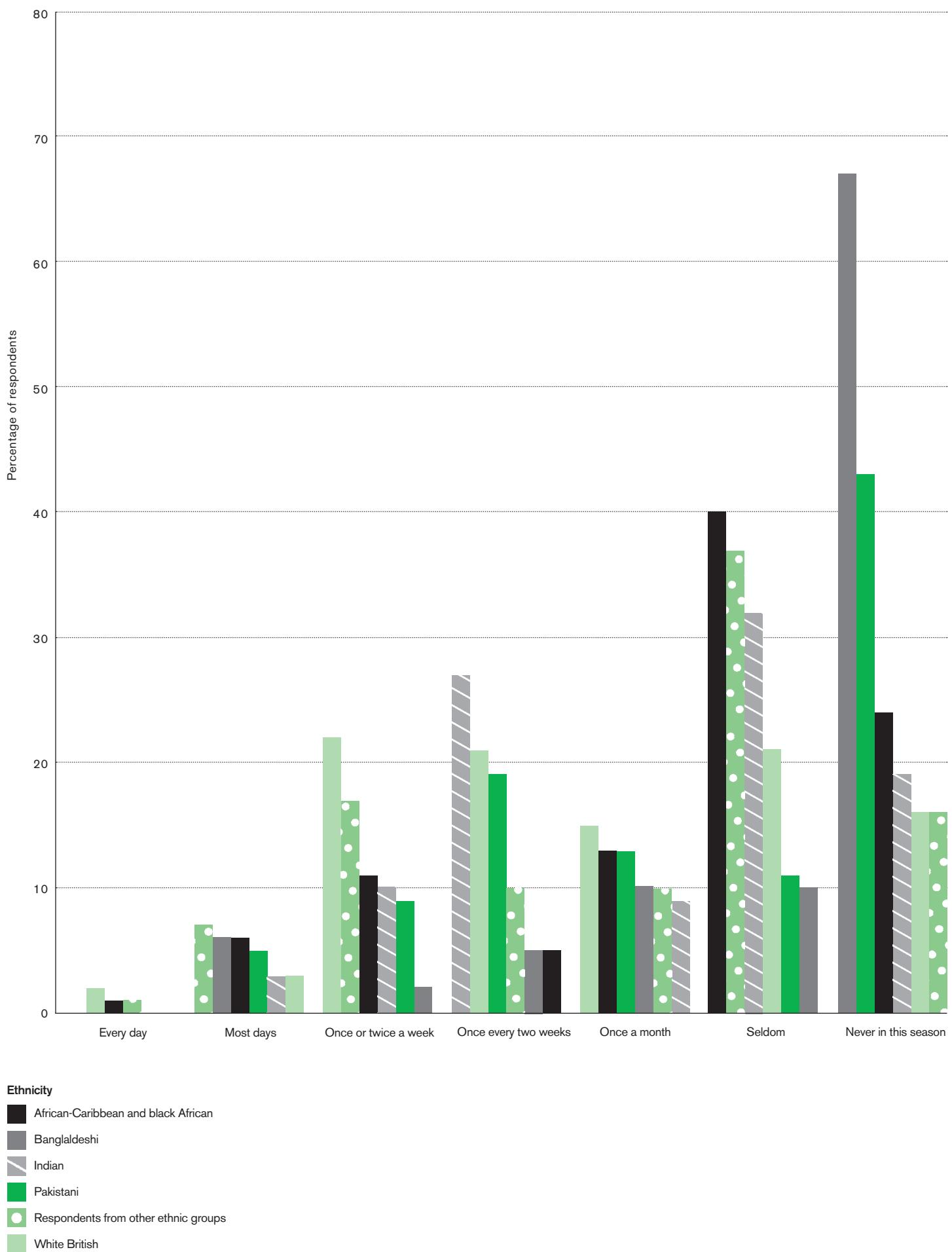
<sup>128</sup> The DEFRA tracker study *Public attitudes and behaviours towards the environment*, 2009 [www.cabearl.com/ag](http://www.cabearl.com/ag)

<sup>129</sup> *Urban green nation: building the evidence base*, CABE, 2010 [www.cabearl.com/cf](http://www.cabearl.com/cf)

**Figure 7: How often do you visit your nearest green space in summer? (percentage of respondents)**



**Figure 8: How often do you visit your nearest green space in winter?  
(percentage of respondents)**



Across interviewees the use of local urban green space was highest in white British people (41 per cent visit most days) followed by Pakistani people (21 per cent of whom visit most days).

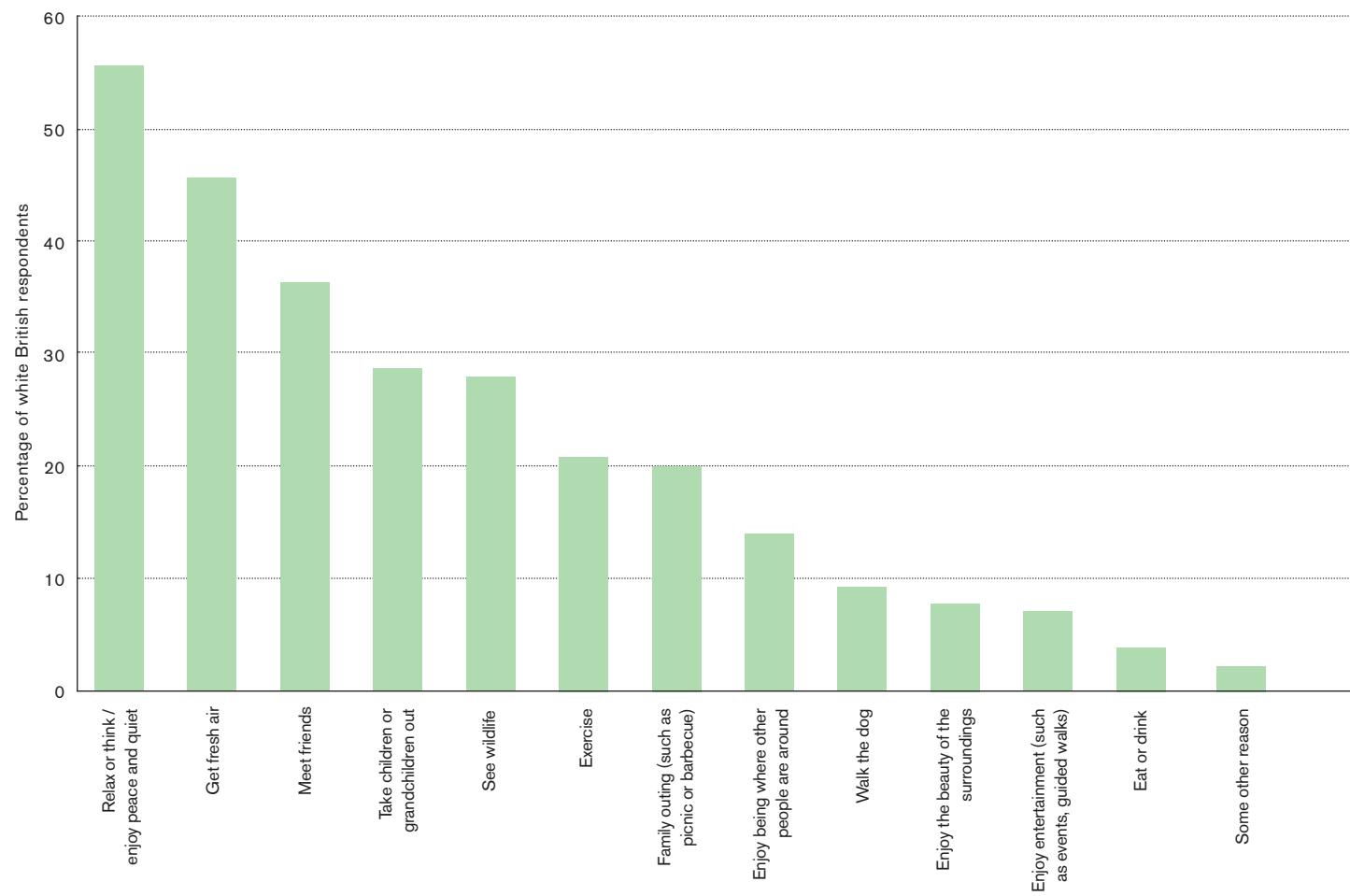
There were very different patterns of use by ethnicity between the summer and winter periods (figures 7 and 8). In winter, white British people are again most likely to visit on a regular basis, whereas Bangladeshi and Pakistani people are most likely to 'seldom' or 'never' visit urban green space in winter and summer.

Our literature review (chapter 2) explored research into the use of green space by different communities. Here, several studies had found that the use of parks by some ethnic groups tends to be social; in large family or friendship gatherings.

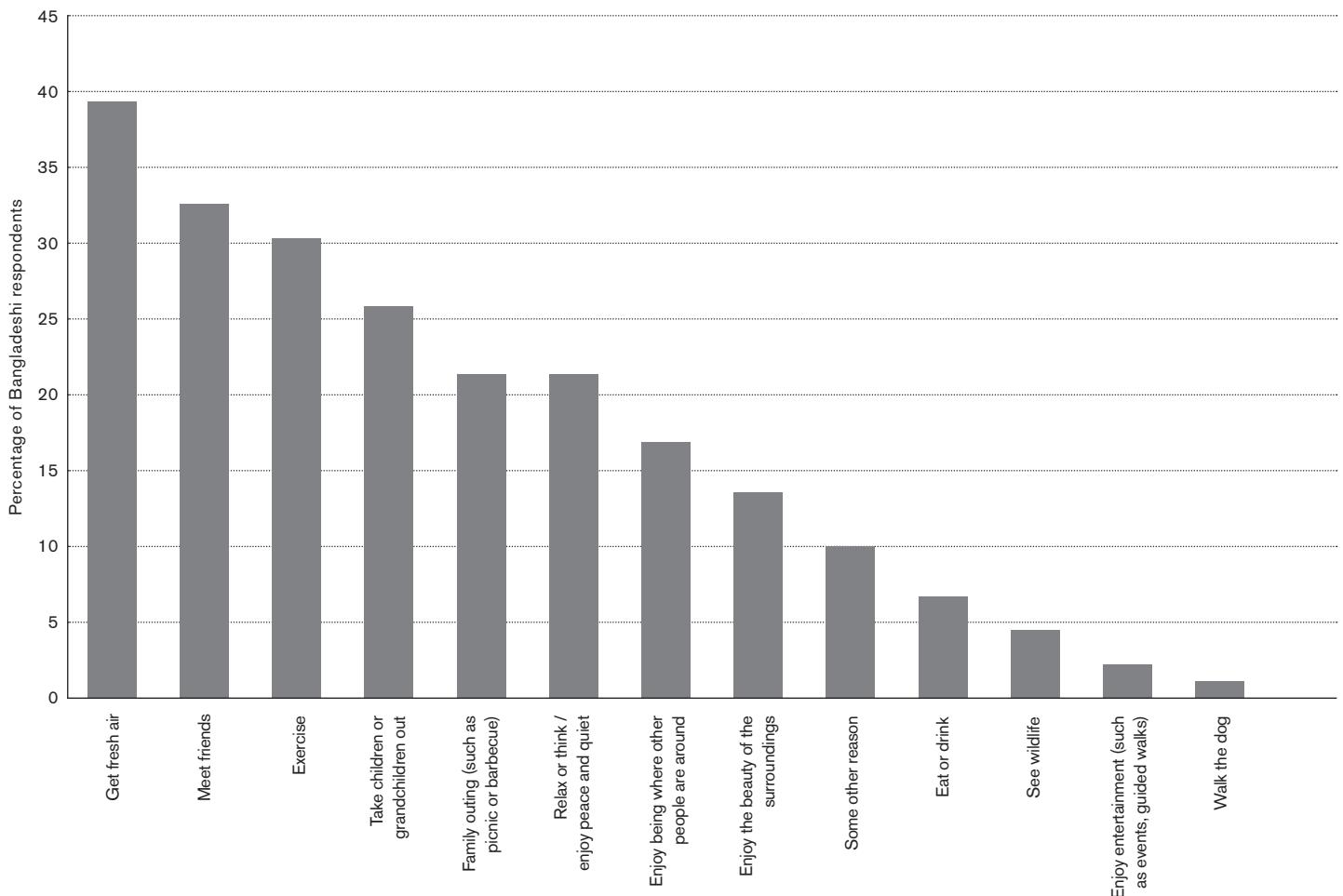
The household survey also found significant differences in the nature of green space use by ethnicity. Black and minority ethnic interviewees were more likely to visit green space for social reasons than the white British interviewees.

Patterns of use differed most between Bangladeshi interviewees and all other interviewees, particularly white British people. As figures 9 and 10 show, white British people were more likely to visit green space for relaxation and to enjoy the peace and quiet of the space. Bangladeshi people were more likely to visit to get fresh air, meet friends and for physical activity.

**Figure 9: What do you normally do when you visit a green space? (percentage of white British respondents)**



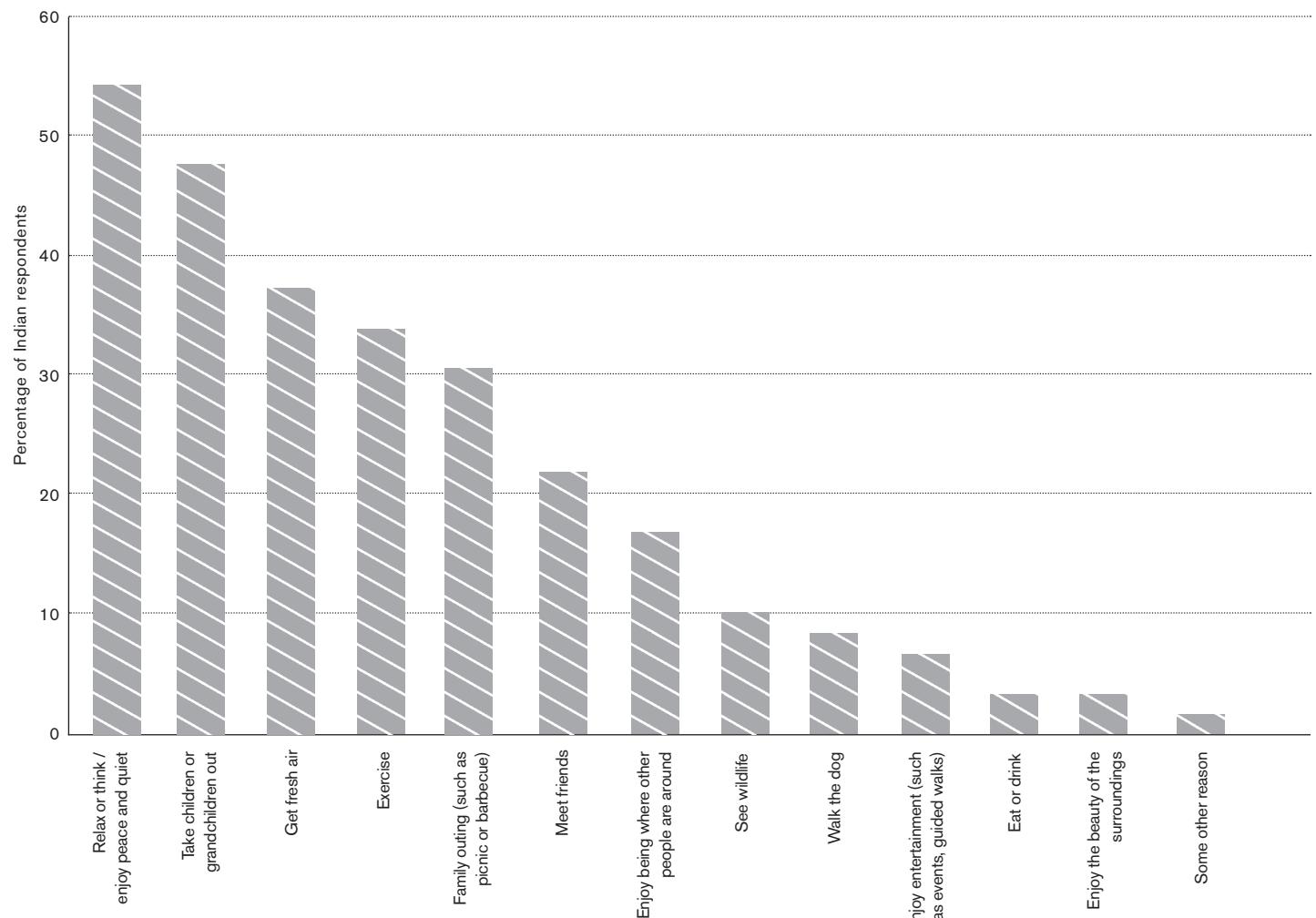
**Figure 10: What do you normally do when you visit a green space? (percentage of Bangladeshi respondents)**



Indian interviewees had emerged elsewhere in the data as an interesting group, reporting high levels of reported health and high levels of physical activity and levels of satisfaction with neighbourhood and green space similar to those of the white British interviewees.

Here we found Indian people are most likely out of all interviewees to visit green space for social reasons such as to take children or grandchildren out and to visit for physical activity (figure 11). Although across all interviewees, Bangladeshi and Pakistani people also reported high usage of green space for physical activity.

**Figure 11: What do you normally do when visiting a green space? (percentage of Indian respondents)**



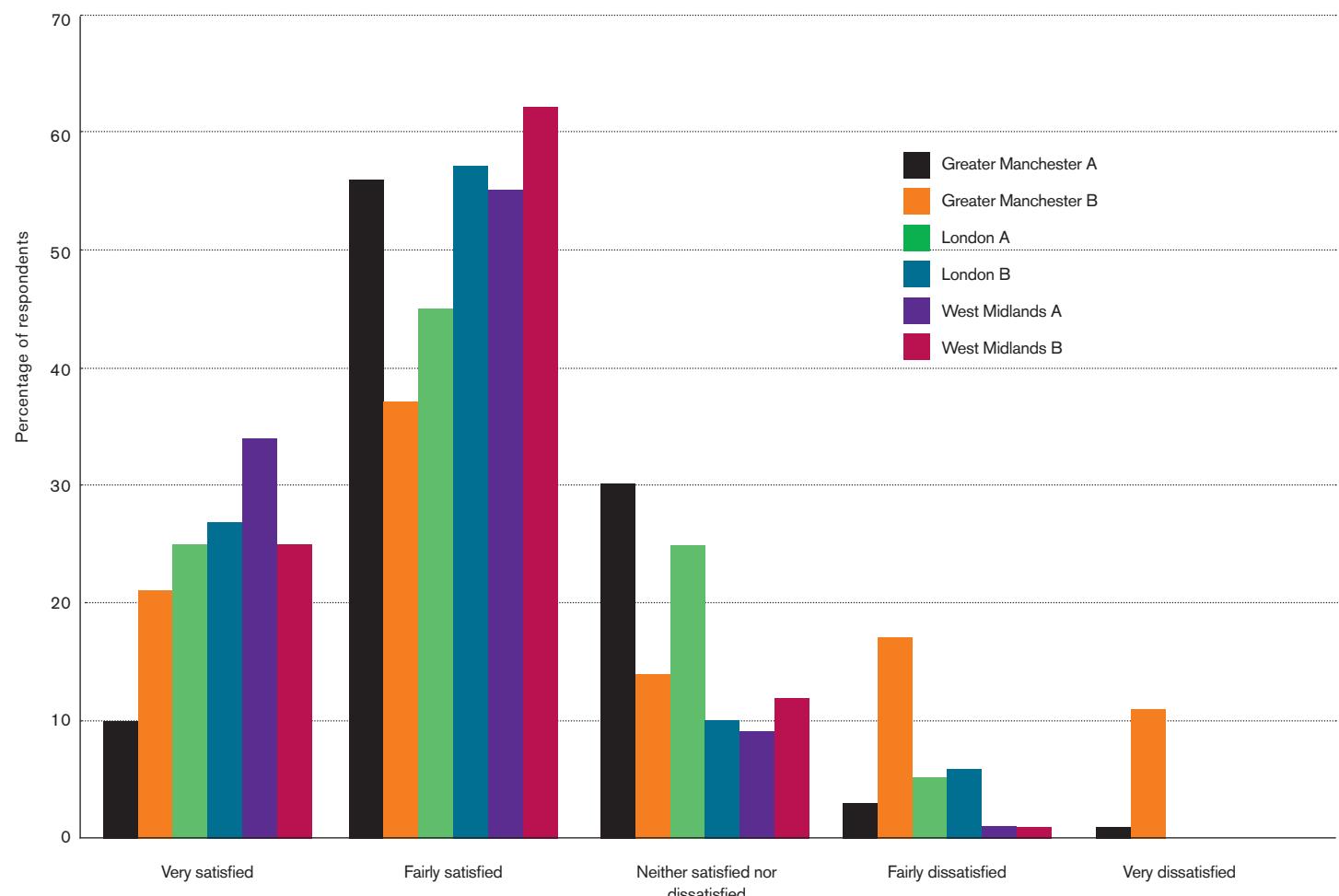
### Satisfaction with neighbourhood and green space

Satisfaction with neighbourhood and with local green space, despite the level of area deprivation, was consistently fair in all the case study areas. Percentage responses for both satisfaction with green space and neighbourhood satisfaction were particularly high in the Midlands.

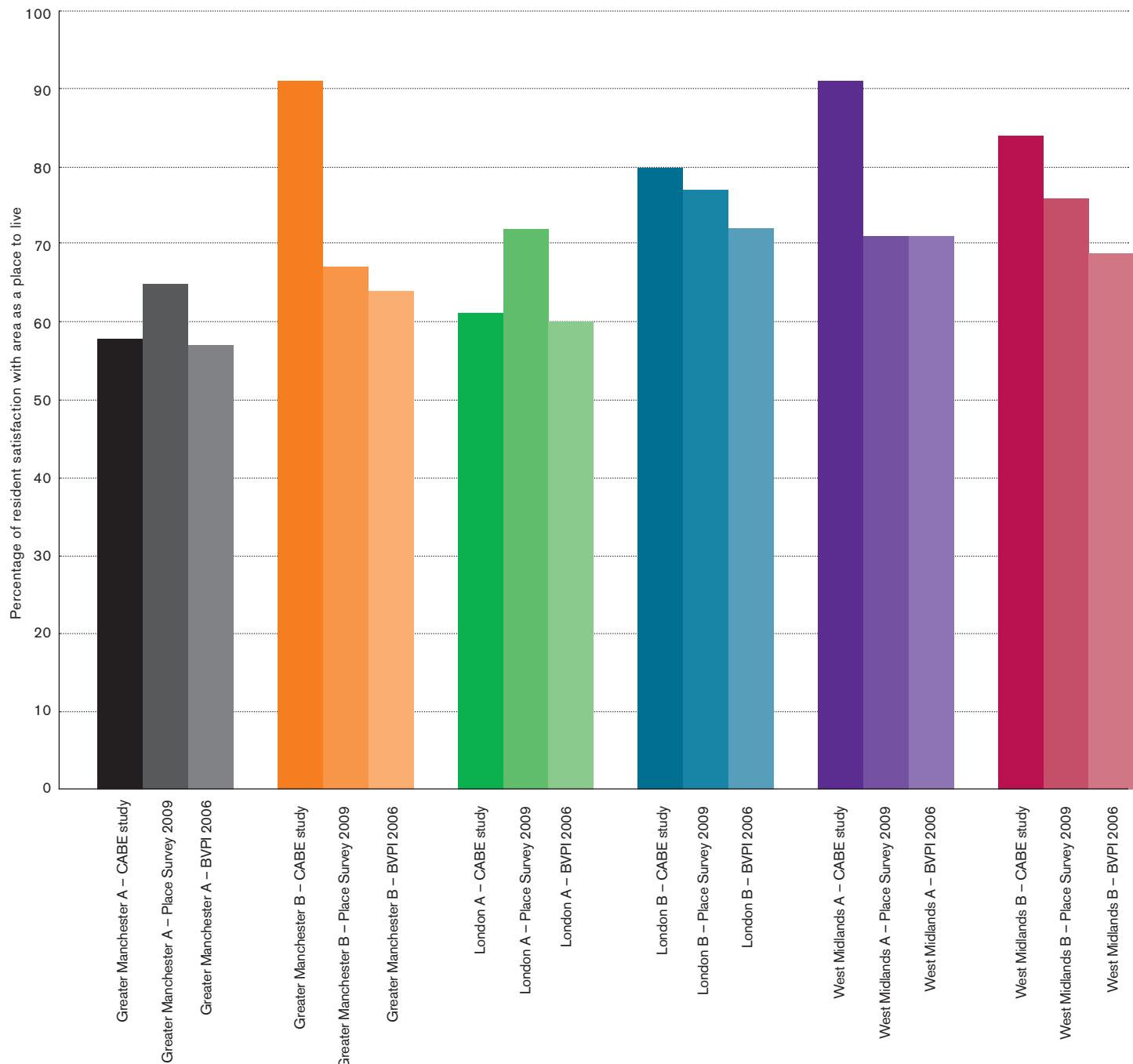
Figure 12 sets out people's satisfaction with their local green space. Figure 13 compares these with the BVPI and Place Survey averages for the areas.<sup>130</sup> However, care should be taken in comparing these results. This study looked at small areas within local authorities and used a different methodology to the BVPI questionnaire and Place Survey, where discussion about satisfaction was part of a much wider and structured discussion about environmental quality and wellbeing. All surveys took place at different time periods.

<sup>130</sup> Our sample specifically targeted two wards in each local authority area, so we did not expect scores to match the local authority averages.

**Figure 12: Respondents' satisfaction levels with the quality of their local green space (by case study area)**



**Figure 13: Comparison of levels of satisfaction with local area as a place to live (by case study area)**



These results were analysed by ethnicity. White British people (88 per cent) and Indian people (87 per cent) were most satisfied with their local neighbourhood. Pakistani interviewees (77 per cent) and Bangladeshi interviewees (73 per cent) were closest to the national average. Black African and African-Caribbean people were the least satisfied with their neighbourhood (62 per cent).

On quality of green space, the patterns were very similar to the different groups' satisfaction with local neighbourhood. Again, white British (90 per cent) and Indian interviewees (86 per cent) scored the highest on satisfaction with the quality of green space nearest to their home (very to fairly satisfied).

These results were above average for urban England; the Place Survey found that in 2009 general satisfaction with parks and open spaces in urban England was 69 per cent.<sup>131</sup>

Bangladeshi interviewees scored the lowest when asked about satisfaction with quality of local green space with 55 per cent very or fairly satisfied. Our results relate to the location of the different ethnic groups sampled. For example, Indian people were the most satisfied and Indian interviewees were predominantly drawn from the Midlands case study areas where satisfaction was much higher. Bangladeshi interviewees were least satisfied and were drawn from the Greater Manchester areas where satisfaction in one area was markedly lower than average.

#### **4. Linking green space quality and health and wellbeing – perceptions of safety and changing behaviour**

As discussed earlier in this chapter, survey respondents ranked perceptions of personal safety as most important in making an area 'a good place to live'. Analysis of the data also revealed a relationship between use of green space and individual perceptions of safety – those who use green space less also tend to feel less safe in their area. This indicates a circular relationship – those who feel less safe are also less likely to use green space.

To explore this in more detail our survey asked people how safe they felt using their local green spaces in the six case study areas and if they experienced barriers in accessing these spaces.

It also uniquely asked people how they thought improvements to these spaces could potentially impact on their use of these spaces – which in turn could benefit health and wellbeing.

#### **Perceptions of safety using local green space**

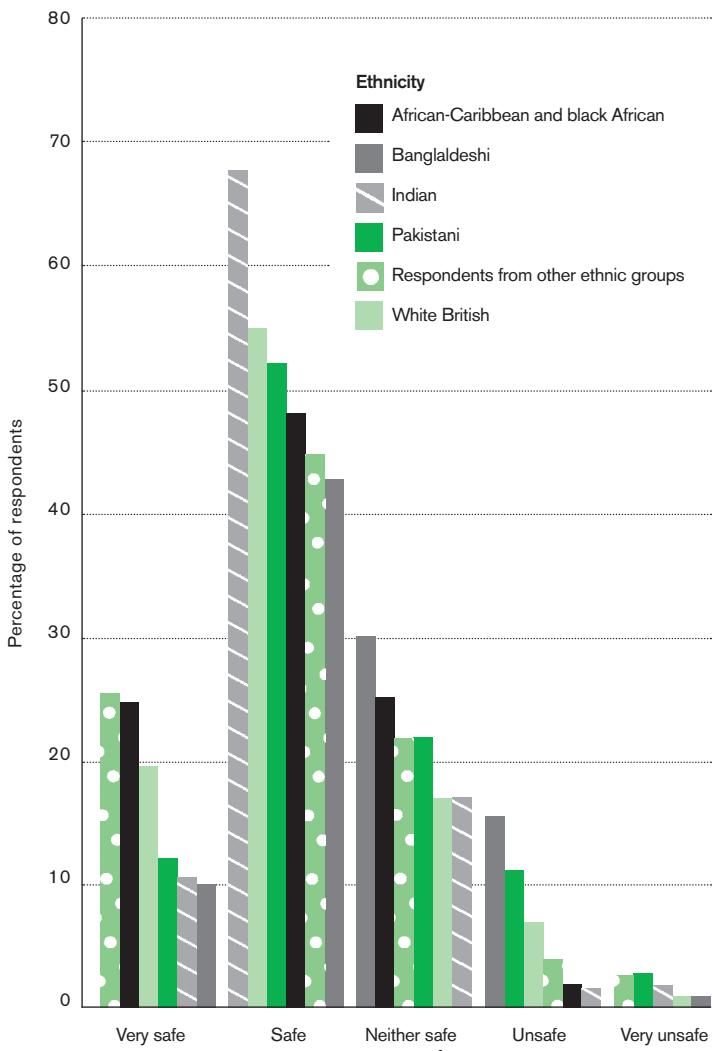
The highest scores on safety (very safe to safe) were in West Midlands A which at 93 per cent were markedly higher than in the other areas. The two Greater Manchester areas scored the lowest (55 per cent in Greater Manchester A and 58 per cent in Greater Manchester B).

The data was analysed by ethnicity. Indian (79 per cent) and white British (75 per cent) people reported feeling most safe (very safe to safe). Of all interviewees, Pakistani (64 per cent) and Bangladeshi (53 per cent) people reported feeling least safe.

This repeats patterns of results found elsewhere in the survey. White British and Indian interviewees recorded high satisfaction and consistently similar results on both perceptions of safety and quality, while Bangladeshi interviewees were least satisfied with the quality of green space and with safety.

<sup>131</sup> [www.cabeurl.com/ae](http://www.cabeurl.com/ae)

**Figure 14: How safe do you feel using your local green space? (by ethnicity)**



### Barriers to use

People were asked if they experienced any barriers to using their local green spaces. The biggest single reported barrier to accessing urban green space was safety. This was expressed both in terms of the physical environment (dense overgrown vegetation, lack of lighting) and the threat of others (gangs, drinking and drug use). Thirty-seven per cent of people reported they would use urban green space more if safety were improved.

These results were analysed by ethnicity, and statistical differences were found. White British and Indian interviewees again showed similarities in their responses, reporting litter and dog fouling as major barriers to use.

### Barriers to the use of green space

Barriers were also discussed as part of the study's focus groups. They included:

- Fear and feelings of insecurity resulting from anti-social behaviour, drug-dealing and taking, and fear of personal attack or racism
- Presence of dogs – either fouling or fear of attack (this was cited particularly among black and minority ethnic women)
- Poor design such as high perimeter walls preventing views in and out, heavy vegetation and lack of lighting promoting feelings of insecurity
- Inadequate maintenance and management leading to vandalism, litter, graffiti and drug paraphernalia
- Failure to acknowledge and provide for the diverse needs of a mixed community, for instance nowhere provided in a local green space for Muslim women to meet away from men
- Lack of facilities, particularly lack of facilities for young children and teenagers, and the removal of well-used and valued facilities such as football and cricket pitches. All groups cited nowhere to sit as a barrier to use.

### Changing behaviour

Interviewees were asked what would encourage them to make better use of their local green spaces. The main responses were:

- a safer environment
- more facilities such as a café, toilets, sports and play areas, particularly for children and young people
- more events
- better paths.

These did not differ by ethnicity. They were priorities all interviewees held in common.

Forty-six per cent of interviewees said they would use urban green space more if it had better facilities. This tallies with our literature review, which found that across all ethnicities the quality of green space, and its good management are highly valued.

If their local green space were made more pleasant and they began to use it more, 60 per cent of people thought it would improve their overall physical health, 48 per cent perceived it could improve their mental health, and 46 per cent thought it could improve their social relationships with family and friends.

Statistical differences by ethnicity were found in all three respects, and especially in perceptions of the benefits of green space for mental restoration. There was some consistency among the white British, Indian and Pakistani interviewees in attaching a high value to the physical and mental health benefits of green space. Patterns among black African and African-Caribbean interviewees and other black and minority ethnic groups also appeared similar.

### Physical activity

All Indian interviewees and 98 per cent of Pakistani interviewees reported they would feel better about their physical health if they began to use green space more.<sup>132</sup> Eighty-nine per cent of Bangladeshi people and 92 per cent of white British reported high responses here.

Responses were lowest in the other black and minority groups at 68 per cent and black African and African-Caribbean interviewees at 76 per cent. While physical activity did not feature highly in current use patterns, in terms of future use (based upon an improved quality green space) it featured much more highly.

### Mental health

All Indian interviewees reported that an increased use of green space would benefit their mental health, as did 90 per cent of Pakistani interviewees and 85 per cent of white British. The figure was also high for Bangladeshi interviewees (73 per cent). This was surprising as their current use patterns did not reflect use of green space for restoration. Percentages were lowest again in the black African and African-Caribbean group (41 per cent) and other black and minority ethnic groups (54 per cent).

### Social wellbeing

Again Indian interviewees reported the highest perceived benefits (97 per cent), with white British (87 per cent) and Pakistani interviewees (73 per cent) also high. Black African and African-Caribbean perceptions were higher on the perceived benefits of green space for social use (62 per cent) than for mental health, but other black and minority ethnic groups perceived social benefits (54 per cent) similarly to mental health benefits. Bangladeshi interviewees scored the lowest on this category, at 46 per cent.

### Aspirations for green space

The study literature review identified a gap in knowledge about which specific physical landscape attributes matter to particular communities, although existing research has highlighted different aesthetic preferences with 'wild' green space having less appeal among some ethnic groups. People's aspirations for their local green spaces were explored as part of the study's focus groups. Here people's 'wish-lists' for their local urban green spaces were largely based on positive recollections of green space experienced in their youth, which they frequently talked about with nostalgia.

Focus group participants' wish lists for local green space included:

- events (festivals, fireworks)
- wildlife, water, long grass
- colour and flowers
- sport (cricket, football, hockey) supported by training
- urban farming (fruit farms, allotments)
- seating for socialising and family areas
- facilities: toilets and cafés, clean and safe play
- cleanliness and safety, wardens
- consultation by landowners and urban green space strategies that embrace diversity
- dog-free area
- female-only areas (cited by Bangladeshi and Pakistani participants).

Young Pakistani participants (male and female) particularly wanted more sport facilities appropriate to their culture, asking for cricket and football as opposed to skateboarding. Muslim young women said it was essential to access separate social spaces away from men.

Our household survey found strong preferences among all interviewees for lots of trees and greenery (34 per cent) and to a lesser extent, for attractive views (24 per cent). The literature review had suggested urban farming was of special interest to some groups, but this was not supported in the survey (only 2 per cent of interviewees reported they would use urban green space more if they could grow things).

<sup>132</sup> Respondents answered either 'yes, definitely' or 'yes, a bit'.

## **Statistical analysis of the relationship between satisfaction and health and wellbeing**

Analysis of this study's survey data confirmed that individual perception of local green space quality is a predictor of satisfaction with the local neighbourhood as an area to live, and that the level of satisfaction with green space is a predictor of its use.<sup>133</sup>

The variables that are statistically significant in predicting satisfaction with an area are: location, ethnicity, and level of income and education. Ethnicity was found to be a stronger predictor of satisfaction and use of green space than level of income.

The survey data was further scrutinised to explore whether satisfaction with neighbourhood and local green space is positively related to better health and individual wellbeing.

Statistically significant relationships were found between both satisfaction with green space, and satisfaction with neighbourhood, and:

- better overall general health (self-reported)
- a better overall quality of life
- higher physical activity levels
- higher levels of social wellbeing.

The attractiveness of green space was significantly correlated with physical activity, social wellbeing and quality of life. Thus, perceptions of the quality of green space are a significant influence on whether some people use it.

There were highly significant relationships between quality of urban green space and many of the health and wellbeing variables (see page 22 for the variables tested). This cannot be interpreted as a causal relationship, but the strength of the relationship was particularly strong for wellbeing.

Variables associated with social wellbeing were strongly related to satisfaction with the local neighbourhood as a place to live. Furthermore, satisfaction with your area as a place to live significantly correlates with levels of use, satisfaction with green space, perceptions of safety and how attractive and pleasant an area is perceived to be.

## **Significance of safety**

Feeling safe in green space was related to almost all of the health and wellbeing variables included in this survey, including physical activity, general health, quality of life and social wellbeing.<sup>134</sup> There is also a highly significant correlation between the level of use of green space and perceptions of safety; this relates to findings from the first section of the study.<sup>135</sup> Lack of safety is one of the most important barriers to green space use.

## **Conclusion**

Our household survey was unique in its approach and scale in analysing the views of over 500 Bangladeshi, African-Caribbean, black African, Indian, Pakistani and white British people. Overall, our research showed differences among ethnic groups in perceptions of area safety, the quality of green space, and level and type of green space use.

Across all interviewees the public park was the most frequently visited space – recorded at 90 per cent of overall use. Seventy-eight per cent of people reported visiting their nearest space on foot, indicating that it is the local neighbourhood park that is of most significance for people's use of green space.

Significantly less than 1 per cent of those living in social housing (21 per cent of the overall survey sample) reported using the green spaces in the housing estate they lived in. Overall, area safety and security was the most important factor in making an area a good place to live. But the role of safety in choosing a preferred place to live varied in its level of importance when ethnicity was taken into account.

The relative importance of access to green space to a good living environment was similar across all ethnic groups, contributing approximately 10 per cent towards making the area a good place to live. This result was compared to data in six European regions. Across the board, the results were consistent, indicating that access to green space is a basic and consistent environmental attribute in making an area a good place to live, regardless of who you are or where you live.

<sup>133</sup> This tallies with the analysis of national data, reported in *Urban green nation: building the evidence base*, CABE, 2010 [www.cabe.org.uk/cf](http://www.cabe.org.uk/cf)

<sup>134</sup> It was related to 11 out of 13 variables.

<sup>135</sup> This is explanatory. It is not possible to show a causal link.

People who were more physically active placed access to green space the highest in importance. Conversely, those who used green space less often, rated safety more highly and green space access lower.

Lack of safety was one of the most important barriers to green space use and this was common to all interviewees. Analysis of the data revealed a relationship between use of green space and individual perceptions of safety – those who use green space less also tend to feel less safe in their area.

Ethnicity was the strongest predictor of green space use in the survey data. Analysis of the data showed highly significant differences by ethnicity, with physical activity and social patterns of use generally stronger among black and minority ethnic interviewees. Black and minority ethnic interviewees were more likely to visit green space for social reasons than the white British interviewees.

The survey uniquely asked people how they thought improvements to these spaces could potentially impact on their use of these spaces, which in turn could benefit health and wellbeing.

Across all interviewees, the biggest single reported barrier to accessing urban green space was safety. This was expressed both in terms of the physical environment (dense overgrown vegetation, lack of lighting) and the threat of others (gangs, drinking and drug use). Thirty-seven per cent of people reported they would use urban green space more if safety were improved.

Survey respondents were asked what would encourage them to make better use of their local green spaces and responses did not differ by ethnicity. All interviewees wanted a safer environment and better and more facilities. Some 46 per cent of people said they would use their local green space more if it had better facilities.

Overall, if their local green space were made more pleasant and they began to use it more, 60 per cent of people thought it would improve their overall physical health, 48 per cent perceived it could improve their mental health, and 46 per cent thought it would make them feel better about their relationships with family and friends. Furthermore, the attractiveness of green space was significantly correlated with physical activity, social wellbeing and quality of life.

Thus, perceptions of the quality of green space are a significant influence on whether some people use it.

Finally, an important question raised by this study is what makes most difference to perceptions of green space quality and its use, and how this influences wellbeing: is it ethnicity or deprivation?

Overall, ethnicity was found to be more important as a predictor of green space use and of neighbourhood satisfaction than income. Ethnicity, therefore, appears to be 'containing' income to some extent; in other words, ethnicity seems to be the principal factor but ethnicity is related to likely income (how well people are coping on their current income) and therefore the two are linked. Thus income, as well as ethnicity, is a significant predictor of urban green space use.

The next chapter sets out the key findings of this research.

## 4 Key findings and conclusion

**The way our urban areas look and feel and how they work is changing. This research follows work published by CABE, *Urban green nation*, which showed that in our urban areas, poor communities have a worse quantity and quality of local green space than those who are better off.**

**As environmental concerns have become mainstream, so has the issue of environmental equity – ensuring that it is not just the well off who benefit from a good environment and, related to that, a good quality of life.**

**Historically, poor areas in our towns and cities have been exposed to a larger share of environmental risks and hazards, and in a changing climate they are also most likely to suffer disproportionately. The study shows that providing good-quality local green space is a hugely effective way to tackle inequality.**

**People living in deprived urban areas view green space as a key service, alongside housing, health, education and policing – one of the essentials in making a neighbourhood liveable.**

**The environment is a key resource, a basic service to use to ensure that those areas already experiencing a mismatch in provision do not get worse.**

### Tackling inequality through local green space

People greatly value local green spaces, from parks, pitches and recreation grounds to woodland and playgrounds. They appreciate the benefits in terms of relaxation and stress alleviation and the opportunity green space provides for exercise, social contact with friends and family and playing with children.

*Community Green* suggests there is a virtuous circle: where people perceive green space quality to be good, they are also more satisfied with their neighbourhood and have better health and wellbeing. When people value their local green space and feel safe in it, they use it more and are more physically active. This relates strongly to ethnicity: for example, Indian interviewees were most likely to visit green spaces to exercise, and reported the highest perceived benefits if their local green spaces were improved.

The desire for more pleasant and attractive green spaces with more facilities was common to all interviewees regardless of their ethnicity. Almost half (46 per cent) said they would use their local green space more if it had better facilities.

Our review of published research shows that green space plays a role in easing racial tensions and bringing diverse groups together, for instance to play football or cricket, and promoting integration by providing space for organised and casual encounters with neighbours and different ethnic groups.

### The opportunities

The study revealed a number of barriers to better use of public green space by black and minority ethnic groups. Only half of Bangladeshi people said they feel safe using their local green space, compared with three quarters of white people.

The study exposes how much green spaces which are on the doorstep are still underused because of their poor quality. Less than 1 per cent of those living in social housing reported using the green spaces on their own estates, and the biggest barriers were fear about personal safety, lack of facilities and poor quality.

Seventeen per cent of households in England are social tenants, up to half of whom are likely to be aged under 16, living in nearly four million homes.<sup>136</sup> Social landlords are responsible for the large areas of green

space that surround these homes. In some areas, particularly in London, this green space stock may be greater than the amount owned and managed by the local authority. While there are some examples of good practice, social landlords could make much more of this extraordinary asset and the benefits of exploiting it.

### Ways forward

The community is best placed to know the specific needs and priorities for their neighbourhood's green space, and local people can play a central role in driving the improvements we need. For example, there are many neighbourhood groups, such as residents' associations or friends of parks, which have taken an active role in the management or ownership of local green spaces, deciding how they are used and improved. Landowners, including local authorities and social housing providers, could do more to encourage this and to ensure community groups have the resources and skills to make it happen.

Landowners can take a more proactive and innovative approach to their green spaces more generally, working with local people to create safer and more attractive green spaces. In the areas that suffer from a shortage of green space, the creative use of temporarily vacant spaces, such as development sites, should be supported.

This matters for local authority performance. Everybody aspires to a better and safer local environment, and CABE research shows that if people are satisfied with their local parks and green spaces, they tend also to be satisfied with their council.<sup>137</sup>

### Findings from the study

#### 1. Green space is a public resource with a proven track record in improving people's health, but too many local green spaces remain unused

The green space that mattered most to people in our study was the local park, which received a resounding vote of confidence despite varying levels of quality and use. It accounted for 90 per cent of the green spaces all people used.

The majority of interviewees (78 per cent) visited their nearest green space on foot, indicating that it is the local neighbourhood park that is of most significance. However, in locations with a higher-quality park, for instance with a Green Flag award, people did travel further.

Where people perceive green space quality to be good, they are more satisfied with their neighbourhood and are more likely to report better health.

Yet significant local green space resources remain unexploited. Public parks are far from being the only green spaces in towns and cities. Less than 1 per cent of those living in social housing (21 per cent of our interviewees) reported using the green spaces in the housing estate they live in. This may be due to concerns about safety, lack of access or poor quality.

#### What CABE is doing

CABE and the National Housing Federation have set out a practical action plan which identifies 10 priorities to improve the quality of the green spaces on social housing estates. The Neighbourhoods Green partnership, which aims to highlight the importance of green spaces for social housing residents, will work with social landlords to take these forward.<sup>138</sup>

<sup>137</sup> *Urban green nation: building the evidence base*, CABE, 2010 [www.cabe.org.uk/cf](http://www.cabe.org.uk/cf)

<sup>138</sup> *Decent homes need decent spaces: An action plan to improve open spaces in social housing areas*, CABE Space and the National Housing Federation, 2010 [www.cabe.org.uk/social-landlords](http://www.cabe.org.uk/social-landlords)

## **2. People's concerns about safety affect their use of local green space. This concern varies by ethnicity**

There is strong evidence that when people value their local green space and are likely to feel safe in it, they use it more and are more physically active. Concern about personal safety is the most important barrier to the use of green space, and perceptions of individual safety differed between ethnic groups. For instance, only 53 per cent of Bangladeshi people reported feeling safe using their local green space. This compares with 75 per cent of white interviewees.

Our survey data shows a relationship between the use of green space and perceptions of safety – those who use their green spaces less also tend to feel less safe in their area.

Barriers to using green spaces were related to ethnicity. They included feelings of insecurity due to the fear of personal attack or racism; exclusion due to the domination of a space by a particular group; and the presence of dogs (dog-fouling or fear of dogs). 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 leading to vandalism, litter, graffiti and drug paraphernalia.

**'These park improvements have improved our quality of life. Where we were scared to walk in the park in fear of being robbed due to overgrown trees and hedges, we can now sit on comfortable seats and enjoy the open space and the flowers without being in fear'**

*Local resident, Groundwork East London park improvement project*

### **What CABE is doing**

CABE's *Decent parks? Decent behaviour?* describes spaces where a combination of good design, management and maintenance has transformed no-go areas back into popular assets used by the whole community. This can be a far more effective use of resources than, for instance, blanket use of CCTV or expensive security measures.<sup>139</sup>

## **3. Improving the quality of spaces will encourage more active use and exercise**

Aspirations for good-quality green space were common to everyone we spoke to. Everybody wanted more facilities such as cafés, toilets, play and sports provision, and improved safety and more community events. Forty-six per cent of people said they would use their local green space more if it had better facilities.

People mentioned the loss of well-used and valued facilities such as football and cricket pitches as reasons why they used space less. This was especially true of young people. Having nowhere to sit was also cited as a barrier to use.

Overall, if their local green space were made more pleasant and they began to use it more, 60 per cent of interviewees thought it would improve their overall physical health, 48 per cent thought it could improve their mental health, and 46 per cent thought it would make them feel better about their relationships with family and friends. Indian interviewees reported the highest perceived benefits of better local green space. While physical activity did not feature highly in people's current use patterns, in terms of future use (based upon an improved-quality green space) it featured much more highly. Fifty-two per cent of those asked said they would do more physical exercise if green spaces were improved.

Indian, Bangladeshi and Pakistani people were more likely than other ethnicities to report visiting urban green space for exercise. This suggests that improved green space use by these groups would also be more active use, and could make an especially important contribution to better health in black and minority ethnic groups.

**'One thing that got us together was football. We grew up playing together, it brought us together. No type of racial tension here, it was simply because of that football pitch. Several years ago it got demolished for flats. It's a real shame. Now there's lots of tension between whites and Asians'**

*Young Bengali male, focus group participant, London*

<sup>139</sup> *Decent parks? Decent behaviour? The link between the quality of parks and user behaviour* CABE space, 2005 [www.cabeurl.com/cg](http://www.cabeurl.com/cg)

#### **4. Local people are best placed to know what they want from green space**

Some groups visited green spaces more than others, and for different purposes, with physical activity (as referred to above) and social patterns of use generally more popular among black and minority ethnic interviewees. They were more likely to visit green space for social reasons than the white interviewees. In fact, in our survey, a person's ethnicity was the strongest indicator of the way they use their local green spaces.

The provision of green space services must take into account the preferences and needs of local people. 'One size fits all' green space does not work: only flexible spaces will meet the needs of a diverse community. The community should be given the chance to make spaces fit for purpose. The unusually high response to our survey demonstrated the concern people have about their local green space. Greater variety and flexibility in provision is required as well as consistently higher quality in all areas.

As the ethnic and age profile of the UK changes, green space managers need to understand the attitudes, needs and different reasons for green space use among local groups. They must work harder to involve their community in the management, planning and delivery of spaces, and existing ways of working may no longer be appropriate. Active marketing of sites; events and activities such as community fun days; guided walks; space for allotments; and considering alternative uses of specific areas will all bolster usage and result in a healthier and more satisfied community.

**'We don't mix with boys. We need somewhere to go to be away from our parents, somewhere just for girls'**

*Young Pakistani female, focus group participant, Greater Manchester*

**'I want colour – flowers, all different colours. I want to be able to walk out there, sit down...enjoy the peace, quiet and enjoy the colour'**

*White male, focus group participant, London*

#### **What CABE is doing**

CABE's Spaceshaper is a practical toolkit that captures people's views about a space. Results can be compared between different groups and used to agree shared priorities for action before time and money is invested in improvements. Young people are often overlooked in community engagement. Spaceshaper 9-14 can be used in schools and youth clubs, enabling young people to get involved in improving their local parks, streets, playgrounds and other spaces.<sup>140</sup>

# Conclusion

## Why these findings matter to everyone

Our study asked people how important access to green space is to a good living environment. The importance of this was compared to seven other factors tested, including suitability of housing and area safety and security.<sup>141</sup>

Access to green space contributed around 10 per cent towards what made an area a good place to live.

The study also found that the need for access to green space is a basic and consistent factor, regardless of who you are or where you live.<sup>142</sup>

Overall, area safety and security were considered most important, contributing 16 per cent towards making an area 'a good place to live'. This result varied in importance according to people's ethnicity, with Bangladeshi, black African and African-Caribbean people rating safety as the second most important attribute after the design and construction of housing.

**The quality of your local green space is of fundamental importance. But some people are missing out. Access to decent green space, alongside housing, health and education, is a basic requirement for a good quality of life. Public green spaces are a local resource for exercise and socialising, community events and education, and offer respite from the pressures of urban living.**

**Locally led green space improvements foster community pride and create spaces people feel safe and confident using. If spaces provide what local people want they will be better used and offer a far better return on investment.**

**The current inequality of provision matters, especially as the ethnic and age profile of the UK changes. Everyone wants to live in an area that has a pleasant and safe environment. The individual and community benefits are immeasurable.**

**Our research concludes that it makes sense to focus on the people in the community who are worse off. Improving green space in urban areas benefits those that have most to gain.**

**'It's high up, and there's a lovely view of the city, a nice Italian café and a pergola. There's a sense of being lost somewhere in time. There's high grass, ponds, different people mixing and a family spirit. Children can play safely there; it's always good for people-watching. I love it because it takes you out of the city. I walk and walk and I breathe. For me this park would have the top award'**

*White female, focus group participant, London*

<sup>141</sup> The other factors were air quality, suitability of housing, area safety and security, noise pollution, shopping facilities, public transport and waste disposal.

<sup>142</sup> Our survey used questions developed as part of a European-wide programme of research. The results were compared with data from six European regions. In this wider dataset access to green space also contributed 10 per cent, indicating this is a consistent attribute in making an area a good place to live regardless of individual differences such as level of income, ethnicity and country of residence [www.plurel.net](http://www.plurel.net)

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# Appendix 1: Summary of international literature review

Abercrombie et al (2008) found evidence of income and race inequalities in access to public parks but not in access to private recreational facilities in Maryland, America. Fewer parks were found in residential areas that have high black and minority ethnic populations (both high and low income). The largest number of parks was found in ethnically mixed, middle-income neighbourhoods. In this context, income deprivation appeared to have less of a negative relationship with park distribution than race.

Heynen et al (2006) reveal both race and income inequalities in the distribution of urban tree canopy cover within Milwaukee and find a strong positive correlation between residential canopy cover and median household income.

Gobster and Westphal (2003) found the quality of open spaces in lower-income African-American neighbourhoods was worse than in other socio-economic neighbourhoods, with a lower percentage of tree vegetation and higher percentage of vandalism.

A Gordon-Larsen et al (2006) study on American teenagers found that those on a low income, and those from a black or minority ethnic group, had reduced access to recreational facilities, including parks and outdoor facilities such as tennis courts. Similarly, Powell et al (2006) reveal income and race inequalities in access to recreational facilities, but did not specifically measure access to green space.

Estabrooks et al (2003) also found income inequalities in accessing free physical activity facilities, including parks, with more facilities available in wealthier neighbourhoods compared to those with low and medium socio-economic status. Kuo (2001) concluded that low-income multi-family housing lacked surrounding green spaces and other leisure amenities.

In Australia, Temperio et al (2007) found that the availability of public open space (percentage as measured by a geographic information system) appeared to be equitably distributed across neighbourhoods of varying socio-economic status, suggesting equitable planning guidelines for open space access in Australia may be a unique and influential factor. However, like much of the research reviewed, this study only considered the availability of parks, and not the park features that may influence people's motivations to access it.

Elsewhere, park features (such as quality, amenity, safety) have been found to be an important predictor of walking in adults in Australia (Giles-Corti et al 2005). The notion that quality may be a factor is further supported in the Australian context by Crawford et al (2008) who found income inequalities in access to park and public open space in terms of the amenities offered. Public open space in higher socio-economic neighbourhoods had more amenities, more trees, water features, paths, lighting and signage.

In America, Cradock et al (2005) found access to play facilities in Boston was reduced in lower-income neighbourhoods and those with high black and minority ethnic populations. But in Australia, conflicting evidence was found: Crawford et al (2008) found no income differences in the provision of play facilities, whereas Veitch et al (2008) found children in poorer urban neighbourhoods had less access to play facilities compared to higher-income groups in urban areas.

## Appendix 2: Summary of UK research on ethnicity and urban public space

Author	Method	Study group	Main findings
Powell and Rishbeth (unpublished paper)	Qualitative (audio methodologies)	First-generation migrants, Sheffield, and use of urban streetscape	Cultural adaptation, social integration Opportunities for temporary escape and for personal change Development of new skills (using public transport)
Dines et al (2006)	Qualitative (focus groups ethnographic analysis, semi-structured interviews)	Newham, London (cross-section of the local residential population in terms of ethnicity, age, gender and housing tenure)	Opportunities for temporary escape and for personal change
Rishbeth (2004 and 2001)	Qualitative and quantitative (2-year project, mixed methods)	Users of Chumleigh Gardens (Southwark, London), Calthorpe Project (King's Cross, London). White British, Asian and black African people.	Divergence between groups on value of 'wild', convergence on quality and management. Nostalgia/reminiscing valued experiences Social gatherings and welcoming space
Topia-Kelly (2004)	Qualitative (biographies)	Asian women	Nostalgia via gardening/sensory experience of landscape
Ravenscroft and Markwell (2000)	Qualitative (interviews of park users plus observation)	Teenage users of 8 parks in Reading	Black youths experience lower levels of satisfaction than either white or Asian youths, greater dissatisfaction with neighbourhood parks  Personal safety, parks least safe environments in the town
Woolley and Amin (1999)	Qualitative and quantitative (Focus groups, questionnaire)	Pakistani teenagers, aged 13-18, Sheffield	Peer interaction main reason for visiting local parks  Cricket and football, main physical activity
Worpole and Greenhalgh (1995)	Qualitative and quantitative (surveys, interviews, observation, 12 local authorities)	Minority ethnic park users in Middlesbrough, Hounslow (London), Greenwich (London) and Leicester	Cultural identity  Family/friend gatherings
Burgess et al (1988)	Qualitative and quantitative (Focus groups, household survey by interview)	Mixed cross-section, local residents, Greenwich (London) and one single gender group of Asian women.	Social interaction  Therapeutic value  Nostalgic value  Preference for local open space, aspirations for more variety

## Appendix 3: Summary of the project review

Over 50 projects engaging communities in urban green space were reviewed. The majority of projects explored were in London, the North-West and the West Midlands, and were based in local neighbourhood green spaces, rather than larger, formal spaces.

Project managers were interviewed over the telephone, or information on the projects was captured via email. The project review provided a snapshot of the range of projects on the ground engaging urban and deprived communities in local green space. It was not possible to interview participants in the projects. Therefore the review largely reflects the interests of the stakeholders consulted.

Type of project	Project and organisation	Community	Date	Website (where applicable)
Community event	Park-it! event organised by GreenSpace, Cross Flats Park, Leeds	Diverse community in Beeston, Leeds, including Asian, African-Caribbean people and asylum seekers from Africa and the Middle East	2006	<a href="http://www.cabeurl.com/cq">www.cabeurl.com/cq</a>
Conservation	Saanjih project, BTCV, Birmingham	Asian women with mental health problems	2002-04	<a href="http://www.cabeurl.com/d3">www.cabeurl.com/d3</a>
	Out and about project, BTCV, Leeds	Refugees	2005-06	<a href="http://www.cabeurl.com/d4">www.cabeurl.com/d4</a>
Education	Pocket, urban street corner, Black Environment Network and Halal mosque, Manchester	Diverse community including white British, Asian and Vietnamese residents	2004	<a href="http://www.ben-network.org.uk/">www.ben-network.org.uk/</a>
	European knowledge-exchange project, Black Environment Network	Woodville, Manchester, high Chinese, Vietnamese and African-Caribbean population	2006	<a href="http://www.ben-network.org.uk/">www.ben-network.org.uk/</a>
	Outdoor classroom, Ben Jonson primary school, Mile End, London	School where every pupil speaks English as a second language	2007-08	

Type of project	Project	Community	Date	Website (where applicable)
Forest	Forestry Commission's Newlands (New economic environments through woodlands) reclaiming large areas of derelict, underused and neglected land across North- West England	Areas of deprivation	Ongoing	<a href="http://www.forestry.gov.uk/newlands">www.forestry.gov.uk/newlands</a>
	Ex-landfill site established as community woodland, Ingrebourne Hill, Rainham, London	Areas of deprivation	2007-08	
	Braithwaite open space, Trees for Cities, Tower Hamlets, London	Bangladeshi and Pakistani people	2007-08	
Health	Active Sefton, North-West England, Walking the way to health initiative, addressing inequalities in physical activity	Parents with young children, elderly people, people with specific physical rehabilitation needs	2006	<a href="http://www.cabeurl.com/cs">www.cabeurl.com/cs</a>
	Let's walk, Braunstone, East Midlands	Deprived residents of large inner-city estate in Leicester. Bangladeshi, Pakistani, African-Caribbean and Indian community	2006	<a href="http://www.cabeurl.com/ct">www.cabeurl.com/ct</a>
	Golden walks, Islington, London	Older, Chinese people	2000 onwards	<a href="http://www.cabeurl.com/cv">www.cabeurl.com/cv</a>
	Get fit for free! Sustrans active travel programme, Marsh Farm housing estate, Luton	Area of deprivation	2005 onwards	<a href="http://www.cabeurl.com/cw">www.cabeurl.com/cw</a>
	Healthy living project, Bankside Open Spaces Trust, London	People with no garden in Bankside and Borough neighbourhood renewal area, London	2005-08	<a href="http://www.bost.org.uk/">www.bost.org.uk/</a>

Type of project	Project	Community	Date	Website (where applicable)
<b>Historic</b>	Gateway Gardens Trust	Inner-city schools, families on low incomes, asylum seekers, and black and minority ethnic groups, in Wales and West Midlands	Ongoing	<a href="http://www.gatewaygardenstrust.org">www.gatewaygardenstrust.org</a>
	Middlegate community garden, Great Yarmouth	Young offenders via the probationary service and local residents	2004	<a href="http://www.cabeurl.com/cx">www.cabeurl.com/cx</a>
	(Ad)dressing the garden, Kenilworth Castle gardens	Asian women in partnership with Coventry Carers Centre	Completed	<a href="http://www.cabeurl.com/d0">www.cabeurl.com/d0</a>
	Community arts festival, Chiswick House grounds	Engaging hard-to-reach groups including young people via Hounslow youth services	2005	<a href="http://www.cabeurl.com/cz">www.cabeurl.com/cz</a>
	Past skills for the future, Luton Hoo walled garden	Young people at risk	2008	<a href="http://www.cabeurl.com/d1">www.cabeurl.com/d1</a>
	Sutton House, black history event, National Trust	Local schools, elderly, local residents in Hackney	2003	<a href="http://www.cabeurl.com/dl">www.cabeurl.com/dl</a>
	Speke Hall podcast, Liverpool, National Trust	Young people at risk	2006	<a href="http://www.cabeurl.com/dm">www.cabeurl.com/dm</a>
<b>Housing</b>	Three community projects led by Whitelaw Turkington Architects	Diverse community	1996 onwards	
	Regeneration of social housing green space led by Peabody on 3 estates including Hammersmith sunken garden and Peabody woodland, Herne Hill, London	Diverse community	2004 onwards	
	Shakespeare neighbourhood residents association's community orchard	Social housing tenants	Ongoing	<a href="http://www.cabeurl.com/d5">www.cabeurl.com/d5</a>
	Environmental improvements to 4 estates managed by Bolton at Home	Social housing tenants	2006-08	<a href="http://www.cabeurl.com/d6">www.cabeurl.com/d6</a>

Type of project	Project	Community	Date	Website (where applicable)
Play	Jubilee playscape, Tolworth, Groundwork London	Two deprived wards in Kingston upon Thames	2007-08	<a href="http://www.cabeurl.com/d7">www.cabeurl.com/d7</a>
<b>Regeneration of green space</b>	Our green space, 3-year Cumbria-wide environmental initiative	Area of high deprivation	2008 -10	<a href="http://www.ourgreenspace.org.uk/">www.ourgreenspace.org.uk/</a>
	Park life, historic park renewal projects	Areas of high deprivation	2004	<a href="http://www.cabeurl.com/cn">www.cabeurl.com/cn</a>
	Urban doorstep green, Peter Pan Park, Islington, London	Bengali, Cypriot, white Irish people and social tenants	2001-06	<a href="http://www.cabeurl.com/co">www.cabeurl.com/co</a>
	Pocket urban park project, Groundwork, Leyton Manor Park, East London	Multi-cultural (Turkish, Asian, African-Caribbean), young people, the elderly	2007-08	
	Birchwood community memorial park, RAF Skellingthorpe, Lincoln	Area of high deprivation	2006-07	<a href="http://www.cabeurl.com/cp">www.cabeurl.com/cp</a>
Urban Farming	Back to Earth, Hackney city farm, London	Area of high deprivation, refugees and asylum seekers, children living in poverty and young people	2006 and ongoing	<a href="http://www.back2earth.org.uk/">www.back2earth.org.uk/</a>
Wildlife	Living roots, Warwickshire Wildlife Trust	Young refugees	2008-10	<a href="http://www.cabeurl.com/d2">www.cabeurl.com/d2</a>
	Going local London Wildlife Trust	Diverse community	2007-08	<a href="http://www.londonwildlife.org.uk">www.londonwildlife.org.uk</a>
	London Wildlife Trust reservoir access projects in Stoke Newington, Hackney and Walthamstow, London	Jewish, Muslim, Turkish and African-Caribbean residents	2007	

## Appendix 4: Focus groups to inform CABE household survey

Focus groups were held in community centres in four of the case study areas: London A, London B, Greater Manchester B and West Midlands A.<sup>143</sup>

The groups aimed to involve a range of people to broadly mirror the area's demographic make-up. A total of 44 participants aged 16 years and over took part.<sup>144</sup> Most sessions were around two hours and all participants were encouraged to join in. Individuals were steered away from any attempt to dominate the discussion. In Greater Manchester B two focus groups were held at the same time – one female-only group and one male-only group.

Location	Time	Number of participants	Male	Female	Ethnicity
Greater Manchester B	Lunchtime	13	5	8	White British, Indian and African-Caribbean
London A	Afternoon	6	5	1	White British, Bangladeshi and African-Caribbean
London B	Evening	13	5	8	Bangladeshi and Pakistani
West Midlands A	Afternoon	12	3	9	Pakistani

### Themes of discussion

Each focus group was organised around a semi-structured interview schedule based on the following themes:

- people's feelings towards their local neighbourhood and perceptions of the quality of local publicly accessible green space
- people's use of green space and the quality of experience
- people's favourite spaces and childhood memories of green space<sup>145</sup>
- aspirations for local green space
- barriers experienced in using local green space.

### Perceptions of neighbourhood and green space quality

In all four groups the quality of physical environment was described negatively, 'dire,' 'very bad'; references were made to drug users, 'needles on the grass'; and a lack of security and safety was a general concern in all locations.

Focus groups held within the areas that had high black and minority ethnic populations defined the local neighbourhood culturally. For instance Greater Manchester B was described as 'it's more Pakistani than anything else'.

The neighbourhood was also defined socially by two groups (Greater Manchester B and London A) but very differently in each. In Greater Manchester B, the sense of community was extremely positive,

<sup>143</sup> The organisation of focus groups and recruitment of participants was greatly facilitated by the assistance of professionals working on the ground in these communities. As a thank you for their contribution, participants received a supermarket voucher.

<sup>144</sup> The groups aimed to attract eight participants. Higher numbers of people participated in the groups than expected.

<sup>145</sup> A factor that is known to influence usage later in life.

'everyone welcome', 'everyone gets along'. This was in contrast to a lack of social cohesion in London A, 'there's not a community here', in part attributed to a swift turnaround in flats in this location.

Local green space was frequently described negatively, 'very bad', 'poor facilities', 'nothing to do'. However, urban green space further afield, and larger parks, were perceived to be much better.

**'They've invested money there [West Midlands A park] – so it's not bad, but take away [that park], for the other areas, it becomes hardly any [good-quality green space], it's really bad'.**

*Pakistani female participant, West Midlands A*

Participants were asked to define green space in order to understand the types of spaces people were likely to be discussing. Across all groups, green space was understood to include parks, grassy areas, hilly places and open spaces as well as areas such as canal towpaths and sports pitches.

Definitions of green space ranged from the small scale (a community garden or allotment, individual trees) to the large scale (local countryside, woods and fields). In some cases green space was defined by a specific activity (cycling, picnicking) or in more abstract terms (fresh air).

There were no distinctive differences in definition between groups, but younger participants (particularly young men) defined green space in terms of sports activities. People recognised the benefits of green space provision in terms of the provision of recreation, providing positive environmental services, and for its health benefits, for instance a place to go for fresh air.

**'...it's high up, lovely view of the city, a nice Italian café and a pergola. There's a sense of being lost somewhere in time. There's high grass, ponds, different people mixing and a family spirit. Children can play safely there; it's always good for people watching. I love it because it takes you out of the city. I walk and walk and I breathe. For me this park would have the top award.'**

*White British female participant, London B*

### **Use of green space in urban areas**

With the exception of London A, most participants reported visiting green spaces fairly regularly, 'we go often, three or four times a week' (West Midlands A). Participants in the London A focus group reported feelings of insecurity and lack of safety in local green spaces which in turn led to a lower level of use.

The most frequently mentioned urban green spaces were parks and, in Greater Manchester B, sports pitches. The use of spaces very much varied by age: young people were drawn to green space for socialising, dating and sports. Most participants reported going on foot, usually with friends and family – especially young female Pakistani and Bangladeshi women, 'always with somebody,' 'ladies don't go [to the park] alone in this area, you'd go with friends'.

Only a few men reported going alone for a walk or a jog in a local park. Residents in London B appeared to access green space using public transport or their own vehicles much more than other groups. This is possibly due to the lack of green space in the immediate area as this was the case study location with the least green space.

The reasons for visiting urban green space were very similar among the groups. Irrespective of age or ethnicity, the most frequently mentioned reasons were for:

- relaxation, tranquillity, breathing space
- fun (dating, socialising, festivals, carnivals and events)
- fresh air, freedom
- exercise and sport
- to play with children/grandchildren.

**'We use them for seeing girls in the park, chill out from our houses...football.'**

**'Feel the freedom, fresh air, you go like, you know, when you're worrying about something...lie down, sit down, just think'.**

*Young male Bangladeshi participants,  
Greater Manchester B*

### **Childhood memories of green space**

Participants recounted many positive memories of green space, particularly the older participants. People enjoyed recollecting their memories and it was in this context that many positive images of green space were evoked. In younger people memories were mostly of sport activities (playing football), which was attributed to reducing racial tension among the community. Many reported changes in safety and reduced opportunities for risk-taking when comparing their earlier experiences of childhood.

**'The ponds, the big boating lake and fishing lake, you'd ride your bike, have a laugh and a joke...health and safety have killed a lot of this, the park rangers have killed it [i.e. cycling].'**

*White British male participant, London A*

**'One thing that got us together was football. We grew up playing together, it brought us together. No type of racial tension here, it was simply because of that football pitch. Several years ago it got built on for flats. It's a real shame. Now there's lots of tension between whites and Asians'**

*Young Bengali male, focus group participant, London*

### **Aspirations for local green space**

People's 'wish-list' for their local urban green spaces was largely based on positive recollections of green space experienced in their youth, which they frequently talked about with nostalgia. Young Pakistani participants (male and female) particularly wanted more sport facilities appropriate to their culture, asking for cricket and football as opposed to skateboarding. Muslim young women said it was essential to access separate social spaces away from men.

Attributes that were considered to make a park a good place to visit were physical features (water, plants, wildlife), innovation (new things, events), food (restaurants, cafes with good views), a variety of facilities (bowls, cricket, play) and people (opportunities to meet new people, socialising, dating).

Participants' wish list for green space included:

- events (festivals, fireworks)
- wildlife, water, long grass
- colour and flowers
- sport (cricket, football, hockey) supported by training
- urban farming (fruit farms/allotments)
- seating/socialising/family areas: 'everyone together'
- facilities: toilets and cafés, clean and safe play
- cleanliness and safety, wardens
- consultation and urban green space strategies that embrace diversity
- dog-free areas
- female-only areas (cited by Bangladeshi and Pakistani participants).

**'I want colour – flowers, all different colours, I want to be able to walk out there and see all different colours, sit down...enjoy the peace, quiet and enjoy the colour'**

*White British male participant, London A*

## **Barriers to use of local green space**

The barriers to the use of local green spaces reflect those that were also identified in the literature review in chapter 2. Barriers discussed included:

- Fear and feelings of insecurity resulting from anti-social behaviour, drug-dealing and drug-taking and fear of personal attack or racism
- Presence of dogs – either fouling or fear of attack (this was cited particularly among black and minority ethnic women)
- Poor design such as high perimeter walls preventing views in and out, heavy vegetation and lack of lighting promoting feelings of insecurity
- Inadequate maintenance and management leading to vandalism, litter, graffiti and drug paraphernalia
- Failure to acknowledge and provide for the diverse needs of a mixed community, for instance nowhere provided in a local green space for Muslim women to meet away from men
- Lack of facilities, particularly lack of facilities for young children and teenagers, and the removal of well-used and valued facilities such as football and cricket pitches. All groups cited nowhere to sit as a barrier to use.

**'There is no diversity of activities available in the outdoor places for the Muslim community. Our youth have different taste of activities than possibly other youngsters in the area'**

*Pakistani female participant, West Midlands A*

**'We are living in a war – the war of postcodes'**

*African-Caribbean female participant, London A*

**'The empty space where we live... it's big, no one does anything to it, they just laid grass on it, nothing is there.'**

*Bengali male participant, Greater Manchester A*

**'We don't mix with boys, we need somewhere to go to be away from our parents, somewhere just for girls.'**

*Young Pakistani female participant, Greater Manchester A*

## **Summary**

Overall, definitions of green space by focus group participants varied by age but not by ethnicity. All people talked of green spaces in urban areas as restorative places to retreat and relax, offering breathing space from the stresses of everyday life.

Safe play and activities for young people were most frequently expressed as key to the provision of good-quality green space in urban areas. The diverse needs of black and minority ethnic groups were also a key theme, particularly the need for different sport options for younger people (for instance cricket as well as provision for skateboarding) and the provision of separate gender zones within spaces.

The biggest single barrier to accessing urban green space was safety. This was expressed both in terms of the physical environment (dense overgrown vegetation, lack of lighting) and the threat of others (gangs, drinking and drug use).

The focus group findings reflect many of those highlighted by the literature and project review. The literature review highlighted the social value of public open space for different black and minority ethnic people. This was confirmed in the focus group discussion. However, white British participants equally highlighted the social value of local spaces; therefore this was something thought to be important by all.

Participants confirmed that urban green spaces could facilitate community cohesion among a diverse community. In this instance, football and sports facilities were mentioned, but in each of these geographic locations (West Midlands A and London B) these facilities had been removed.

The restorative value of urban green space (for example, to reduce stress) was confirmed across all groups and ages. In addition, the need for fun in the form of events and entertainment was expressed by everyone. There was no evidence of particular

differences in aesthetic perceptions of green space among different ethnicities; visual attributes of green open space (wildlife, colour, interest) were unanimously popular among participants.

There were, therefore, fewer differences in perceptions of urban green space among the different white, black and minority ethnic groups than had been expected on the basis of the literature review.

The major differences appeared to be in relation to use: the need for young Muslim women to socialise away from men, and the high sports usage among the young black and minority ethnic males.

The results of the focus group discussions fed directly into the design of the household survey, which is outlined in chapter 3.

# Appendix 5: Auditing environmental quality in the case study areas

**Formal environmental audits were undertaken in all of the case studies to assess the quality of the green spaces within these areas. Thirteen spaces, mainly parks, were audited and the information gathered aided the interpretation of the responses to the household survey (chapter 3). The audits also provided an opportunity to check how people perceived 'quality' while actually in a green space compared to judgements made 'at a distance' in the survey and focus groups.**

A modified green space audit tool was used to audit quality in the case study areas.<sup>146</sup> This is both a qualitative and a quantitative tool used to evaluate the quality and experience of any green space in terms of its user-friendliness, character and opportunities for use, set in its neighbourhood context. The tool was designed to be used by qualified environmental designers and, with guidance, by local people.

Each audit was conducted by two trained OPENspace staff members (the same staff were not used at every site) and members of the specific local community (an average of five per site).

The OPENspace auditors were from diverse cultural backgrounds (two White British, one Indian, two White European and one South American). The 30 local community auditors were 52 per cent male, 48 per cent female; aged 16-65+ (with 20 per cent over 65); and mainly Pakistani (35 per cent), white British (35 per cent) or Indian (14 per cent). Other participants were African-Caribbean, African, Kashmiri, Bangladeshi and British Asian.

Audits were completed on-site after a facilitated walk in the green space. Participants scored the space using seven criteria on a five-point scale. The criteria were: neighbourhood quality, green space quality, access, facilities, use, maintenance and security. The scoring was based on their experience 'on the day' rather than past experiences. There were also opportunities under each criterion to add comments.

## Results of audits

In most locations the sites selected for the audits were the spaces most frequently mentioned by survey respondents. Overall, there was variable quality in green spaces within the areas. Interestingly, quality was most variable in the audit of West Midlands A, yet this area rated very highly on satisfaction scores within the household survey.

Quality of green space in the household survey was most variable in Greater Manchester B (highest of all in the 'very dissatisfied' category for quality of green space). This is contrary to audit findings, where both parks in this borough were rated very highly for quality. This could suggest that access to these parks is not equitable among all residents or that there is variability in park quality within this local authority.

People's perceptions of green space on-site were much more positive than in focus groups and more consistent with the ensuing survey data gathered from individuals.

It is possible that being in a green space on a sunny day within a social context influenced the results or that focus group opinion can be swayed by the group dynamic. This shows the importance of carrying out on-site assessments with the community, and that value judgements vary according to context. There are clearly differences in perceptions of green space quality depending on the process by which this data is gathered.

Scoring of quality was consistent between staff and community auditors, with the exception of London B community parks, where differences were found on two criteria: use and maintenance.

Overall, the audits demonstrated the value of 'in the field' impressions and substantially added to understanding of perceptions of quality and value of urban green space in the case study locations.

<sup>146</sup> Proven to be reliable and robust when used by OPENspace in other areas.

**This study examines the impact of the quality of local green spaces on the health and wellbeing of people living in six deprived areas. It makes the connections between green space, ethnicity and inequality. It is the second of two pieces of research by CABE on why green space matters for health and wellbeing. This report will be of interest to policymakers, those working in local government, social housing or the voluntary and community sector.**

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