

The Value of Public Space

How high quality parks and public spaces
create economic, social and environmental value

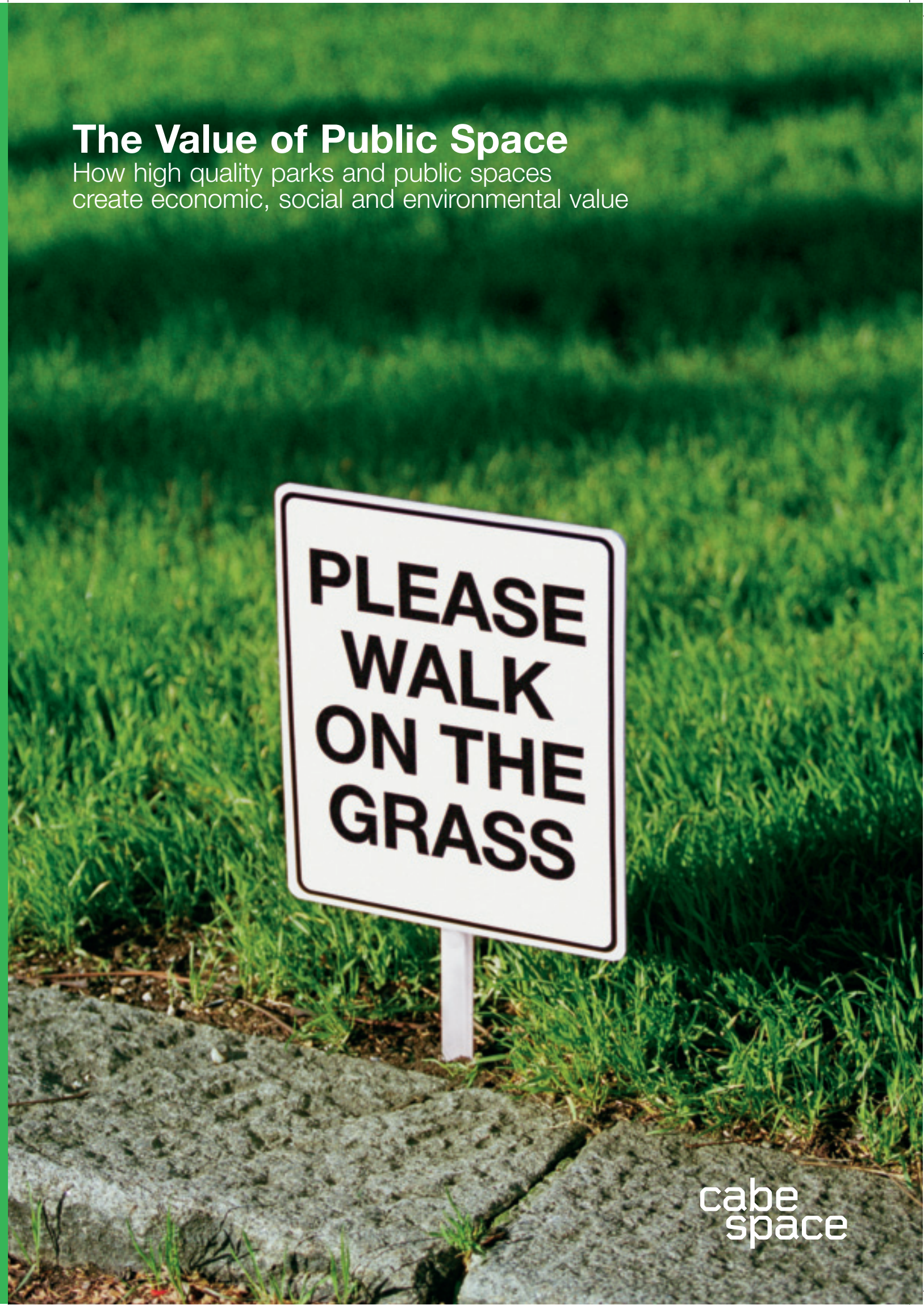
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It is estimated that each year well over half the UK population – some 33 million people – make more than 2.5 billion visits to urban green spaces alone.¹ Not surprisingly, people become attached to these parks, gardens and other open places, and appreciate them for what they offer culturally, socially and personally. In research carried out for CABI, 85 per cent of people surveyed felt that the quality of public space and the built environment has a direct impact on their lives and on the way they feel.² But having access to public space is not all that matters – just as important are the planning, design and management of that space.

Unfortunately, despite their importance to us, our public spaces are often taken for granted or neglected. Certainly, during the last few decades of the 20th century, the amount of money invested in their provision and upkeep failed to reflect the vital role they play in people's lives.³ According to the Government's Urban Task Force, for example, the general perception of our public environment is that it is run down and unkempt – a fact that contributes to a widespread dissatisfaction with urban life.⁴ Indeed, CABI Space's own 'Wasted Space?' campaign revealed that as a society we continue to undervalue public space in all its guises – streets, squares, parks, gardens, and the wide variety of incidental open places found in our towns and cities.

All too often, badly designed, badly managed public spaces are in the most deprived urban areas. Because of the lack of investment, they fail to improve the quality of life for the local people as they could, and should. Indeed, shabby, badly maintained public spaces only worsen the sense of physical and social decline in an area. In those places where regeneration projects are being undertaken, it is important to ensure that the push for higher density housing is not at the expense of good-quality outdoor spaces. In fact, the higher the density of housing, the greater the need for well-designed, well-managed public spaces to aid 'liveability' in that community. It also makes economic sense as the research highlights the increase in property and land values surrounding good quality parks.

Intuitively, we all understand the benefits of open space: a walk, a breath of fresh air, a change of scene. We know we feel better for it and research from Japan goes to show that good neighbourhood green spaces promote longer life expectancy for local people. The aim of this document is to give the facts, to spell out the many ways in which public spaces improve and enrich our lives. It gives politicians, local authorities, businesses, consultants and communities the information they need to make the case for better quality civic spaces. It draws on the most robust and reliable sources of information from the UK and around the world, and presents persuasive evidence of the huge benefits of investing in, and caring for, our public spaces. A reference section is provided at the end of this report so that users can seek out the original sources if further details are required.

If any doubt remains that public space deserves to be the subject of greater effort and greater investment, the evidence presented here will dispel it. As Deputy Prime Minister John Prescott argued in *Living Places: Greener, Safer, Cleaner*, 'Successful, thriving and prosperous communities are characterised by streets, parks and open spaces that are clean, safe and attractive – areas that local people are proud of and want to spend their time in'.⁵

The wasted spaces of the past and present represent wasted opportunities – opportunities that, when seized, have the power to dramatically improve the quality of life for people everywhere.

Sir Stuart Lipton, Chairman, CABI

One Tree Hill, London



Queens Square, Bristol



Exchange Square, Manchester

Introduction



Sir Stuart Lipton,
Chairman, CABI

“We are the fourth wealthiest nation in the world, and yet we have chosen for a long time to dress ourselves in rags. As a society we seem now to accept the poverty of our streets and spaces.”

Public space is all around us, a vital part of everyday urban life: the streets we pass through on the way to school or work, the places where children play, or where we encounter nature and wildlife; the local parks in which we enjoy sports, walk the dog and sit at lunchtime; or simply somewhere quiet to get away for a moment from the bustle of a busy daily life. In other words, public space is our open-air living room, our outdoor leisure centre. ➡

The Economic Value of Public Space

A high-quality public environment can have a significant impact on the economic life of urban centres big or small, and is therefore an essential part of any successful regeneration strategy. As towns increasingly compete with one another to attract investment, the presence of good parks, squares, gardens and other public spaces becomes a vital business and marketing tool: companies are attracted to locations that offer well-designed, well-managed public places and these in turn attract customers, employees and services. In town centres, a pleasant and well-maintained environment increases the number of people visiting retail areas, otherwise known as ‘footfall’.

A good public landscape also offers very clear benefits to the local economy in terms of stimulating increased house prices, since house-buyers are willing to pay to be near green space. ➡

The positive impact on property prices

Many cities are also now seeing that the redevelopment of high-quality public spaces aids the regeneration of an area, with commercial property prices increasing in those locations. There is evidence too that a well-planned, well-managed public space has a positive impact on the price of nearby domestic properties. In the towns of Emmen, Appeldoorn and Leiden in the Netherlands, it has been shown that a garden bordering water can increase the price of a house by 11 per cent, while a view of water or having a lake nearby can boost the price by 10 per cent and 7 per cent respectively. A view of a park was shown to raise house prices by 8 per cent, and having a park nearby by 6 per cent. This compares with a view of an apartment block, which can reduce the price by 7 per cent.⁷

A similarly positive picture emerges from Dallas, where many residents cited the public green spaces running behind their back gardens as a major factor in their decision to move to the area. Sixty per cent of these residents believed that the value of their homes was at least 15 per cent higher because of the presence of the green spaces. Half of the people who did not have green spaces at the back of their homes said they would prefer to have this kind of communal green area close by, even though that would mean less private open space. Almost all residents valued these public green spaces highly and most used them for recreational activities regardless of whether or not their homes backed on to them.⁸



Queens Square, Bristol
St George's Park, Bristol



Good for business

For retailers, a good-quality public environment can improve trading by attracting more people into an area. It has been shown, for example, that well-planned improvements to public spaces within town centres can boost commercial trading by up to 40 per cent and generate significant private sector investment.⁹ Urban design improvements undertaken as part of a wider strategy can have even more dramatic results. In Coventry, improved pedestrianisation, a new civic square, clearer signage and better placement of street furniture have made the city centre a much more attractive place to be, as has the introduction of CCTV and radio security schemes, and an alcohol-free zone. As a result, footfall in the town centre has risen by 25 per cent on Saturdays, benefiting local trade tremendously.⁶

Being close to public space adds economic value

- Small businesses choosing a new business location rank open space, parks and recreation as a number-one priority.¹⁰
- In 1980, 16 per cent of Denver residents said they would pay more to live near a greenbelt or park. By 1990 this figure had risen to 48 per cent.¹⁰
- In Berlin in 2000, proximity to playgrounds in residential areas was found to increase land values by up to 16 per cent. In the same study, a high number of street trees resulted in an increase of 17 per cent in land values.¹¹
- Lease rates of properties facing Post Office Square in Boston, Massachusetts, command a 10 per cent premium over those without a park view.¹²
- Municipal investment in Union Square, New York, in 1985 stimulated private housing investment in the area. Restoration of the park helped to stabilise commercial and residential property values adjacent to the park. Apartments with a park view command a higher price than those without.¹²



Exchange Square, Manchester



Jubilee Park, Canary Wharf, London
Thames Barrier Park, London

Creating tax revenue

By helping to increase the value of homes in this way, parks and other public spaces bring wider benefits in terms of increased taxes paid to government (or, in the US, to the state) when properties are bought and sold. A good example comes from San Francisco, where proximity to the Golden Gate Park has been known to increase property prices from \$500 million to \$1 billion, thus generating between \$5-10 million for the state in annual property taxes.⁹



The Impact on Physical and Mental Health

‘Obesity already costs more in public health terms, and will overtake smoking as Britain’s biggest killer in 10-15 years if current trends persist’.¹³

There is growing concern about the health of the nation and particularly that of our children and young people. A variety of research has identified these startling facts: 20 per cent of four-year-olds are overweight, and 8.5 per cent of six-year-olds and 15 per cent of 15-year-olds are obese.

This increase in obesity is linked to ever more sedentary lifestyles and a reduction in outdoor activity. Evidence shows that adult patterns of exercise are set early on in life.¹⁴ Inactivity breeds inactivity, so a lack of exercise when young can in turn create problems in adulthood such as diabetes and heart disease. It is not just the nation’s physical health that is at risk: there are concerns too about people’s mental well-being, given the stressful lives that many now lead. Each year the economy loses millions of working days through stress-related employee absence.

Clearly these problems need to be addressed. Access to good-quality, well-maintained public spaces can help to improve our physical and mental health by encouraging us to walk more, to play sport, or simply to enjoy a green and natural environment. In other words, our open spaces are a powerful weapon in the fight against obesity and ill-health. ➡



Clifton Downs, Bristol

The health benefits of walking

Safe, clean spaces encourage people to walk more and therefore offer significant health benefits. Some doctors are even prescribing a walk in the park to aid patients' health' as it has been proven to reduce the risk of a heart attack by 50 per cent,¹⁵ diabetes by 50 per cent,¹⁶ colon cancer by 30 per cent,¹⁷ and fracture of the femur by up to 40 per cent.¹⁸ If done as part of a group, walking offers social benefits too.

A study of walking groups has shown that just increasing the distance walked from one to two miles a day means one less death per year among 60 male patients aged 61-80 who suffer from heart disease. It is also estimated that if just one in 100 inactive people took adequate exercise it could save the NHS in Scotland as much as £85 million per year.¹⁹

Green spaces and long life

Evidence from Japan emphasises the vital role that tree-lined streets, parks and other green spaces play in our lives. Not only do they enhance our sense of community and our attachment to a particular neighbourhood – they can even help us live longer. Of more than 3100 people born between 1903-1918 in Tokyo, 2211 were still alive by 1992; the probability of their living for a further five years was linked to their ability to take a stroll in local parks and tree-lined streets.²⁰



Thames Barrier Park, London

Greenwich Park, London

A place for sport

It has been estimated that some 7 per cent of urban park users in England go there for sporting activities¹ – that represents about 7.5 million visitors a year.²¹ Sports such as football are part of the weekly routine for many people and require good-quality pitches. As people get older, the types of sports they enjoy may change, with golf, bowls and cycling becoming more popular with the over-sixties.²² All of these activities help us to keep fit by protecting the cardiovascular system and preventing the onset of other health problems.

Many of our hard urban public spaces also offer opportunities for less formal but equally beneficial sports. Skateboarding, for example, mostly attracts younger males.²³



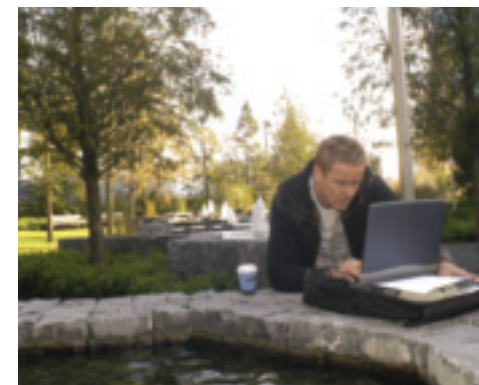
The importance of nature and 'green exercise'

There is increasing evidence that 'nature' in the urban environment is good for both physical and mental health. Natural views – of elements such as trees and lakes – promote a drop in blood pressure and are shown to reduce feelings of stress.²⁴ Many people express this effect by saying that a park or green space is a good place to 'get away from the stresses of life'.¹

One suggested way to obtain both physical and mental health improvements is through 'green exercise' – taking part in physical activities 'whilst at the same time being directly exposed to nature'. Increasing access to high-quality public spaces where green exercise can take place produces substantial public health benefits and so reduces healthcare costs.¹³

The environment and mental health

Improvement in people's mental well-being is one of the benefits of a better physical environment. When housing and the surrounding external environment on one typical new-town estate were upgraded in consultation with residents, 'substantial improvements' were recorded in the mental health of those residents.²⁵



Jubilee Park, Canary Wharf, London

Anchorsholme Park, Blackpool





The Benefits for Children and Young People

Under the UN Convention on the *Rights of the Child*, children have the right to play, recreation and culture.²⁶ Play is crucial for many aspects of children's development, from the acquisition of social skills, experimentation and the confrontation and resolution of emotional crises, to moral understanding, cognitive skills such as language and comprehension, and of course physical skills. But increasing urbanisation has left our children with far fewer opportunities than previous generations to play freely outdoors and experience the natural environment. Good-quality public spaces – including well-designed school grounds – can help to fill this gap, providing children with opportunities for fun, exercise and learning. ➡

The value for children with Attention Deficit Disorder

Children suffering from Attention Deficit Disorder (ADD) benefit from activity in public spaces, especially green spaces. When parents of children with ADD were asked to nominate the activities that they had found made their children more manageable, 85 per cent of green-space activities (such as fishing and soccer) were said to improve the children's behaviour, while only 43 per cent of non-green activities (such as video games and watching television) were regarded as beneficial. Indeed, 57 per cent of non-green activities were said to result in worse behaviour.²⁹

Challenging play space

Forest areas within the urban landscape can offer a stimulating external environment in which to play – resulting in healthier children more able to deal with managed risk. In Scandinavia, children aged around six were found to develop balance and co-ordination faster when playing in a forest than in a traditional playground. The challenges inherent in this kind of natural play space – with its differences in topography and varying forms of vegetation and rocks – and the children's intuitive use of all they found around them were credited with this improved development. Moreover, an increase in the time these kindergarten pupils spent outdoors resulted in fewer absences because of sickness and an increase in both their motor fitness and their creativity in play.²⁷



Trees and grass are good for children

Spaces with trees and grass offer better play opportunities for children than places without such landscape elements. In inner-city Chicago, children were observed playing in areas surrounding apartment blocks; these play areas were similarly arranged but not all of them had trees and grass. Significantly higher levels of creative play were found in the green spaces than in the barren areas. Children playing in the green spaces also had more opportunity to be with adults, a factor that can aid the development of interpersonal skills.²⁸

Playtime is important

The school playground provides an important daily opportunity for children to play and socialise. Taking a break from the traditional classroom setting is now recognised to be vital for a variety of reasons. Whatever their age, children learn better and more quickly when breaks are included in the academic timetable. For younger children in particular, non-structured outdoor breaks are effective in helping cognitive development. Time in the playground also gives children the chance to develop social skills by interacting with their peers and making friends.³⁰



Gorse Hill Estate, Stretford, Manchester

Thames Path, Kingston-upon-Thames



Dinton Pastures, Berkshire

One Tree Hill, London

Windmill Hill, Bedminster, Bristol





Reducing Crime and Fear of Crime

Fear of crime and, to a much lesser extent crime itself, can deter people, not just vulnerable groups, from using even good-quality public spaces. Children and young people, for example, are often prevented from using our parks, squares and streets because of their parents' fears about crime, whilst women often also face particular concerns. Physical changes to, and the better management of, public space can help to allay these fears. Such changes can help everyone to make the most of public spaces. ➡

Secure spaces mean less crime

In Openshaw, Manchester, concern about burglars and joy riders led one housing residents' action group to change their courtyard into a secure community garden. The residents now hold keys to the courtyard, keep to agreed standards of conduct when using it, and are able to personalise their own space within it. There were no burglaries in the six months following the implementation of the scheme; over the course of a 12-month regeneration period, residents also set up a neighbourhood watch scheme, and when going on holiday can now leave keys with trusted neighbours.³¹

Community gardens reduce crime

In a residential neighbourhood in southern Ontario, Canada, a community garden was created on the site of an old rubbish dump, previously a place that attracted local criminals and was avoided by the 1200 local residents. The development of the site, carried out using CPTED (Crime Prevention Through Environmental Design) principles, resulted in a 30 per cent drop in crime over the following summer. Moreover, the reduction in crime in surrounding buildings has encouraged residents to use the streets more at night, increasing natural surveillance. As a result, fear of crime has lessened. The garden has brought other benefits too, including greater interaction between different ethnic groups within the community.³²



The benefits of increased lighting

Birmingham City Council achieved a 70 per cent drop in theft from shopping bags by increasing the lighting of their street markets and widening footpaths from 2m to 3m to give pedestrians more space. A similar street lighting project in Dudley has been credited with encouraging more pedestrians, particularly women, to use the streets at night. This in itself has a self-policing effect.³³

Regents Place, Euston Rd, London

Mowbray Park, Sunderland

Cromer Street, London



In London, streets in Edmonton, Tower Hamlets and Hammersmith and Fulham were assessed before and after street lighting improvements were introduced. The benefits resulting from the improved lighting were a reduction not only in the level of crime but also in the perception and fear of crime. In Edmonton, 62 per cent of people interviewed said they felt safer using the streets, with 83 per cent of those respondents attributing their increased sense of safety to the improved lighting levels. In Tower Hamlets, although 69 per cent of people felt safer, only 30 per cent attributed this feeling to the improved lighting, with the majority not knowing why they felt safer. Thus improved street lighting appears to make people feel safer even if they are not fully aware of it.³⁴

Reducing crime at bus stops

A study carried out in Los Angeles in the late 1990s discovered that the location and visibility of bus stops can have an impact on crime. Where bus stops were clearly visible, offered shelter to the user and were on streets with high levels of vehicle traffic, criminal activity was less common. In contrast, crime rates were found to be higher if the bus stop was at an intersection with an alley, next to off-licences, cashpoint services, vacant buildings or on-street parking, or in areas where there was a lot of graffiti and litter.³⁵



Piccadilly Gardens, Manchester

Grainger Town, Newcastle





The Social Dimension of Public Space


Public spaces are open to all, regardless of ethnic origin, age or gender, and as such they represent a democratic forum for citizens and society. When properly designed and cared for, they bring communities together, provide meeting places and foster social ties of a kind that have been disappearing in many urban areas. These spaces shape the cultural identity of an area, are part of its unique character and provide a sense of place for local communities. ➡

Promoting neighbourliness and social inclusion

The open spaces near our homes give us a valuable place to socialise with our neighbours, whether chatting over the garden fence or meeting in the local park. Gardens and allotments, for example, can provide an especially good community focus and an opportunity for small, personal interactions: in the West Midlands, allotments have been shown to encourage cross-community and cross-cultural ties.³⁶ On a larger scale, community gardens and city farms bring people together from different ages and cultures, and thus help to create a real sense of neighbourhood.^{36, 37} Once again, however, quality counts: the better the design of the space in question, the better the quality of the social experience. In this regard, it has been found that big, bland spaces on housing estates fail to offer the same opportunities for social cohesion as more personal spaces.³⁸

A venue for social events

One of the benefits of high-quality public space is its potential as a venue for social events. Well managed festivals and other events can have a very positive effect on the urban environment, drawing the community together and bringing financial, social and environmental benefits. They can, in particular, reintroduce the kind of civil society that has been lost in too many of our urban areas. One good example is the annual New Year's Eve 'First Night' festival in Boston, US, which has established itself as a key feature in the city's calendar; business people who were initially sceptical about its potential now see the festival as a major boost for their companies, and the city's artistic community also benefits. To encourage events like these, along with their spin-off benefits, cities need to plan the physical layout of their public spaces with festivals and other social activities in mind.³⁹

 Mughal Gardens, Lister Park, Bradford

 Finsbury Square, London



Public space generates community cohesion

Public spaces are not just empty voids. Typically, they are filled with both soft and hard landscape elements to help shape their character. What we put into our public spaces is just as important as the space itself.

One example of the good creative use of public urban space comes from Aachen in Germany. The street life of this historic city has been enhanced by a long-term strategy to enliven its civic spaces, making use of its fantastic array of carefully situated fountains and sculptures. Public art depicts daily life in Aachen and makes historical references, but at the same time is fun to look at and interact with, appealing to adults and children alike. Meanwhile, sponsorship of these artworks allows many of the city's family-run businesses and larger corporations to feel that they have a direct stake in the quality of the public environment.⁴⁰ The result is a city with a unique identity, one to which residents positively respond.



Green spaces are well used

There is evidence to show that people use their local public spaces more, and are more satisfied with them, if these include natural elements: a green and pleasant space is generally, therefore, a well-used space. A study in Chicago found that people living in apartments tended to use nearby public spaces more if they were 'natural' than if they were man-made. This increased use of the green spaces led in turn to a greater amount of socialising among neighbours – initially as they met while simply pausing to sit, and later to deepen social ties.⁴¹

The social value of trees, plants and 'natural areas'

A view of trees is, along with the availability of natural areas nearby, the strongest factor affecting people's satisfaction with their neighbourhood. Having somewhere to grow flowers and vegetables also significantly affects feelings of community.

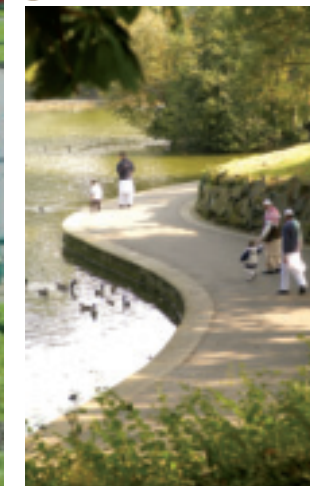
How and where these natural areas are located is important. It has been found, for example, that if green spaces are surrounded by housing or are in some way a continuation of the home environment, then they are shared by residents and are unlikely to suffer from the kind of maintenance problems that arise when there is a lack of perceived ownership. Large open spaces, on the other hand, do not often generate such positive community feelings. It is most beneficial, therefore, to provide small natural areas close to housing, providing opportunities to grow flowers and vegetables.⁴²



 Mowbray Park, Sunderland

 Lower Gardens, Bournemouth

 Lister Park, Bradford





Movement in and Between Spaces

One of the fundamental functions of public space is that it allows us to move around – on foot, by bicycle, by car, motorbike or public transport. A key objective of public-space design and management is therefore to reconcile the needs of these often conflicting modes of transport. Well-designed streets and public spaces encourage walking and cycling, and have the power to make our environment a safer one by reducing vehicle speeds and use. ‘Home Zones’ have begun to demonstrate the benefits of redesigning streets for shared use by residents and pedestrians, not just cars. ➡

The current dangers to pedestrians

A body of evidence gathered by the charity Living Streets⁴³ suggests that public space design all too often favours the private car at the expense of pedestrians. The statistics on the use of public space by children are the most revealing, and the most shocking:

- The proportion of primary school children walking to school fell from 67 per cent in 1985-86 to 53 per cent in 1997-99.
- Britain has the worst record for child pedestrian casualties in Europe.
- Children from the poorest households are over four times more likely to be killed as pedestrians than those from the richest households.
- Accommodating pedestrians and enforcing reduced speed limits across the country's residential areas would save around 13,000 children a year from death or injury, while creating 20mph zones in all appropriate residential streets would prevent an estimated 50,000 casualties a year.

Good-quality public space encourages cycling

In Copenhagen, Denmark, measures were introduced to reduce traffic and make the city centre more pleasant. A six-fold increase in high-quality public spaces in the city led to a variety of social, environmental and economic benefits, including a 65 per cent rise in bicycle use since 1970. Use of public spaces generally has gone up too, demonstrating that if a city is furnished with well-planned, well-managed open spaces, people will use them – even in a relatively cold climate like Copenhagen's.⁴⁴



- Blue Carpet Square, Newcastle
- Cathedral Gardens, Manchester
- Bristol to Bath Cycle Path, Somerset

Good public transport reduces levels of traffic

In Strasbourg, France, the city's public spaces and its transport system were improved in a joint strategy. Use of public transport has gone up by 43 per cent since 1990 thanks to the introduction of a 12.6km tramline and the doubling of the number of trams serving the city centre. At the same time, the city's streets and squares have been given a distinctive image, with important spaces along the tram's route, such as the main square, receiving special attention. Traffic levels in the centre have been reduced, and the tram's success in converting people from private to public transport (70,000 passengers daily) means that a total of 35km of new track is now planned.⁴⁵



- The Methleys Home Zone, Leeds
- Bournemouth Square, Bournemouth

Fewer cars on residential streets

Residential streets with well-designed layouts and a 20mph speed restriction point to significant benefits. A health impact assessment (HIA) carried out on Morice Town Home Zone in Plymouth, for example, found a reduction in accidents and car fumes, and found children being able to play in a safer street. Residents also felt that the area would become a more friendly place with less disruptive traffic.⁴⁶



Traffic erodes the sense of community

A classic American study examined three residential streets, virtually identical except for their levels of traffic – 2000, 8000 and 16,000 vehicles per day respectively. What became apparent was that the heavier the traffic, the more limited the social activities of all kinds in that community. Residents on the lightly trafficked street had three times more friends and twice as many acquaintances as those on the street with heavy traffic. Residents on the heavily trafficked street almost never extended their perceived 'home territory' beyond their own front yard. While those on the lightly trafficked streets marked out the entire road as their home territory. Moreover, people living on the heavily trafficked streets tended to sell their homes more quickly and move on, further undermining any sense of a stable community.⁴⁸

The importance of open access

A study in Brisbane, Australia, compared street vitality and travel behaviour in gated and non-gated communities. It revealed that those living outside gated communities were affected by them, because they had to travel around them rather than through them, and their journey times were increased as a result. By measuring pedestrian behaviour and human interaction, the study also found that street vitality was higher in non-gated communities, where more than 30 per cent of activity was due to the presence of children. In contrast, children in the gated communities were restricted to playing in their own gardens. The study concluded that providing quality space is not enough – what is needed are high-quality public spaces.⁴⁷



Value from Biodiversity and Nature

The significant increase in hard surfacing and the reduction in green spaces lead to higher temperatures in towns and cities than in the surrounding countryside. This is known as the 'heat island effect'.⁴⁹ Vegetation – whether in public spaces or private gardens – can help to redress this imbalance. It brings many important environmental benefits to urban areas, including the cooling of air and the absorption of atmospheric pollutants.⁵⁰ Vegetation also provides an opportunity for people to be close to 'nature', with the associated positive impact that this can bring in terms of mental health and the simple pleasure of experiencing trees, birds, squirrels, ladybirds and other wildlife in an urban situation. ➡



 Russell Square, London
 Welsh Harp, West Hendon
 Manor House Gardens, Lewisham



The 'park breeze' and air quality

The difference in temperatures between parks and that of surrounding urban areas gives rise to a 'park breeze' – a gentle wind which blows from the park out to the adjacent buildings. Poor air quality in a town may be ameliorated by the fresh air blown out from the parks. Indeed, air even in small parks has on the whole been found to be purer than that of its surroundings despite being close to heavy traffic. This depends, however, on the layout of the town and wind direction.⁵³

Trees cool air and provide shade

A study of four urban areas on Merseyside revealed that the greatest influence on their ecology was the proportion of green space, particularly trees. The places with the greatest number of trees had better carbon-storage capacity and a lower level of surface water running off into drains (allowing sewers to cope better with water-flow and minimising flood problems). Moreover, the temperature was 7°C cooler where vegetation cover was 50 per cent compared to areas where the vegetation cover was only 15 per cent.⁵¹

Research in Tel Aviv similarly points to the benefits of trees: it was shown that the presence of trees resulted in a cooling of the air temperature of between 1°C in a heavily trafficked street to 4°C in the smallest (0.15ha) garden. The Tel Aviv study also found that the shape of the green area had an impact on cooling, and that the cooling effect could be felt up to 100m from the site.⁵² Cooling can be facilitated by even a small space – parks of only one or two hectares have been found to be two degrees cooler than surrounding areas.⁵³ Trees also have the benefit of providing shade on hot days and in sunny climates.





Nature and wildlife amongst the urban fabric

The current debate about housing, and whether it should be on brownfield or greenfield sites, often centres only on the buildings themselves and not on the external environment. However, there is clear evidence to show that brownfield sites offer many opportunities for wildlife in the city – they can, in fact, provide more wildlife habitats than the agricultural countryside.

Aside from the intrinsic value of having nature in our cities, urban wildlife habitats also provide a focus for local communities, who often become very attached to them. At Clifton Backies in suburban York, for example, there is a 12ha stretch of scrubby woodland with clearings which contains a diversity of flowers (such as betony, pepper saxifrage and great burnet), birds and other wildlife. This green urban fragment is so highly valued by the community that, when bulldozers arrived to obliterate it, local people stood – literally – in their path and saved it.⁵⁴

Further evidence of the value of urban wildlife comes from the Greenwich Open Space Project in south London, which evaluated attitudes to nature in local people's lives. Groups from three different Greenwich neighbourhoods and a fourth group of Asian women discussed what open spaces meant for them. What became clear was that the opportunity for contact with nature in the city is particularly highly valued: open spaces are felt to provide a chance to experience nature and see creatures such as foxes at close quarters; they are places for exploration and 'adventure'; and they provide a variety of natural forms in contrast to the man-made environment. Even the simple knowledge that a natural area exists is, for many, a source of satisfaction.⁵⁵



 Trafford Ecology Park, Manchester
 Stag beetle



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