Building Health

Creating and enhancing places for healthy, active lives

What needs to be done?

NATIONAL Heart Forum

LIVING STREETS

CABE

Building Health – An introduction

The **National Heart Forum** is the leading alliance of over 45 national organisations working to reduce the risk of coronary heart disease in the UK.

Living Streets is the champion of streets and public spaces for people on foot, working on practical projects to create safe, vibrant and healthy streets for all.

The **Commission for Architecture and the Built Environment** (CABE) is the Government's advisor on architecture, urban design and public space.

Together we share an interest in nurturing an environment that has a positive impact on public health.

Building Health is the result of a partnership of these three organisations. The project sets out to increase awareness of the public health role of organisations concerned with urban design and improving the public realm, in particular in relation to population levels of physical activity, and to facilitate implementation of good health-promoting practice.

This report brings together draft 'position statements' on specific aspects of the built environment, written by leading experts and campaigners.

These draft position statements were used as the basis for discussion at an expert consensus meeting in December 2006, and to prepare a detailed *Blueprint for Action.*

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Finally, we would like to thank Rosie Leyden for her valuable assistance in editing the manuscripts.

Foreword

The National Heart Forum, Living Streets and CABE are proud to have joined together to commission this report and the accompanying summary document – *Blueprint for Action*. Our organisations share a strong interest in improving the design and management of buildings, public spaces and places in ways that can improve public health through encouraging regular physical activity.

Growing rates of avoidable chronic diseases such as coronary heart disease, diabetes, cancer and obesity are over-burdening the National Health Service and generating huge social costs, including reduced quality of life and reduced healthy life expectancy. The UK now has the highest rates of obesity in the European Union. Regular, moderate physical activity can help prevent or reduce the impact of most avoidable chronic diseases but, across the UK, levels of physical activity are very low.

There is growing evidence to show that the quality of the environments people experience on a daily basis can have a strong influence on levels of participation in physical activity. This is not only about access to the countryside and urban green space; it also includes issues such as provision for pedestrians and cyclists in city centres, the design of buildings, and the layout of towns and cities.

Good-quality built environments and healthy people are key contributors to the 'triple bottom line' of sustainable development, which brings together economic, social and environmental issues. This report is being launched as the Government prepares to move forward on reforms to the planning system which will shape our communities for decades to come. We need to seize this opportunity to ensure that the health impacts of these decisions are taken into account. The design and management of the built environment can create barriers to physical activity – or they can create opportunities for activity that make an active lifestyle an attractive and compelling choice.

We want to thank the experts who contributed papers to this report. The robust recommendations they have developed, with input from the attendees from an expert consensus meeting, address different aspects of the problem and together will help create an environment more conducive to physical activity and improve the health of our nation.

Paul Lincoln
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Some people are determined to keep fit and physically active, and will find ways to be active even when special facilities and physical space are either non-existent or inappropriate. But most of us are physically active only when certain social and environmental conditions are in place. Health promotion is about making healthy choices the easy choices. For many countries, the costly obesity epidemic has been the wake-up call to look for antidotes to our increasingly sedentary lifestyles. We have learnt that the way we build our cities, design the urban environment, and provide access to the natural environment can be a great encouragement – or a great barrier – to physical activity and active living. That is what we need – encouragement. We need to make it easier to be physically active in our everyday life at work, at home, at school, in our neighbourhoods or when we choose what form of transport to use for getting to different places. And this is where architects and town planners have a great deal to contribute.

The scientific evidence on the links between the built environment and physical activity behaviour is getting stronger, especially when aspects such as safety and the social needs of people with different physical abilities are also addressed. The World Health Organization actively promotes and supports the development and implementation of healthy urban planning policies and interventions. The importance of urban planning and the key role of local governments in promoting physical activity and active living were emphasised in the 2006 Istanbul European Ministerial Conference and Charter on Counteracting Obesity. *Building Health* is a timely report which clearly outlines the current problems and, more importantly, makes practical recommendations for building for health and active living. I am convinced it will make a difference and will be well received by practitioners and decision-makers.

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Executive summary

An executive summary of this report – called *Building Health: Creating and Enhancing Places for Healthy, Active Lives: Blueprint for Action* – is available from the National Heart Forum (see address on page 2). Or it can be downloaded from www.heartforum.org.uk, or www.livingstreets.org.uk or www.cabe.org.uk.

Introduction

We are living in an increasingly sedentary society. Low levels of physical activity represent a significant public health challenge, both in the UK and in many other countries, largely an outcome of our transition from agricultural to industrial and technological economies. Two hundred years ago 'physical activity' was not an issue: people were habitually active through work (whether paid work or looking after the home) and walking was the predominant mode of transport. But in the 21st century we have removed many opportunities for physical activity from our lives: we do largely sedentary jobs; we travel larger distances, mainly by car; and we have developed a vast array of gadgets to fill our leisure time and reduce physical labour. We may have overcome significant previous public health problems such as infectious diseases but these have been replaced by non-communicable diseases influenced by lifestyle.

But is this important? What are the health consequences of these 21st century sedentary lifestyles? Fortunately the evidence base for the relationship between physical activity and health is extremely strong. The World Health Organization has pointed out that increasing activity levels will contribute to the prevention and management of over 20 conditions and diseases including coronary heart disease, diabetes, certain forms of cancer, and overweight and obesity; and physical activity can also help to improve mental health.[1] Rising levels of obesity are the most visible outcomes from low activity levels, with recent data showing the UK to have the highest levels of obesity in the European Union.[2] The cost to society is also significant: in 2004 the Department of Health estimated the cost of inactivity in England to be £8.2 billion a year – including the rising costs of treating chronic diseases such as coronary heart disease and diabetes and the indirect costs caused through sickness absence. The contribution of inactivity to obesity is estimated to cost a further £2.5 billion each year.[1]

So what can be done to tackle this epidemic of sedentary living? What evidence is there to show which interventions and approaches are effective in increasing physical activity? Here, the evidence is not as convincing as the evidence on the health benefits of physical activity. It is only in the last ten years or so that the research community has turned its attention away from investigating the relationship between physical activity and various aspects of health, towards the question of 'What works?' Early research in this area focused on the effectiveness of inter-personal interventions such as offering advice in primary care, or the use of written materials, and has shown that interventions can be effective in increasing levels of physical activity in the short term. However, such

individual-focused interventions tend to reach only small numbers of people, attract certain population groups, and have a relatively low population impact. And it seems likely that changes in psychosocial factors alone cannot fully explain the decrease in levels of physical activity at a population level.

There has therefore been an increasing focus on the links between the environment and physical activity – looking at how the layout of towns, cities and buildings can influence opportunities to be physically active, especially as part of everyday lives.[3] This field has enormous potential to influence population levels of physical activity but the current research evidence – particularly in the UK – is relatively sparse. Thus we can see what has been called an 'inverse evidence' law, where less is known about the effects of interventions that may be most likely to influence the health of the largest number of people. We also know very little about how interventions might have differential effects on different groups, depending on factors such as socioeconomic status or physical disability.

This report aims to investigate some of the key issues concerning the relationship between the environment and physical activity where research evidence may be lacking. It brings together thinking from leading players in the area, and presents a series of 'real world' recommendations. We have taken a broad definition of physical activity, with a focus on walking and cycling as part of daily life, rather than sport or planned exercise. This means a move away from the traditional planning issues of the location of sport or leisure centres, and a greater focus on the way that towns, cities and buildings might be designed to encourage human-powered movement. We have tried to take a similarly broad view of the issue of the environment and health, and look at the topic from several diverse angles.

The report starts by looking at issues of **strategic planning** (chapter 1) and **urban planning** (chapter 2), and then goes on to look at the nature of **streets and the public realm** (chapter 3), with a specific focus on designing for **walking and cycling** (chapter 4). It then looks at **urban green space**, which includes parks and other green areas (chapter 5), and **outdoor playing space** (chapter 6). The final chapter looks at the potential influence of healthy **building design** (chapter 7). The recommendations from each chapter have been brought together into a *Blueprint for Action,* to be used as the basis for discussions with Government and key agencies. The hope is that we will be taking some of the first steps towards actions that can begin to improve the environment and help people lead more healthy, active lives.

1 Strategic planning

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Strategic planning: what's the problem?

There are systematic ways in which strategic planning influences people's levels of physical activity, specifically through influencing opportunities for 'active travel' – walking or cycling to get somewhere. This chapter argues that many of the key policy decisions affecting physical activity are taken at the strategic level, and that we have been ignoring the potential influences on active travel at the cost of our long-term health.

Strategic planning is defined as including city, county and regional planning policy, embracing the dimensions of transport, housing, employment, services and environmental protection. In the UK context it therefore includes Regional Spatial Strategies (RSSs), Local Transport Plans (LTPs) and Local Development Frameworks (LDFs). These set the context for more detailed and focused local-level planning.

The link between strategic planning and physical activity is both profound and insidious. Well-targeted research, however, is hard to come by. The literature on physical activity and the built environment – in any case a relatively new area of research – often focuses more on issues related to local planning and design. At the strategic level, the research has tended to emphasise very broad-brush variables, especially residential density and land use mix.[4] At this general level there is a clear relationship of travel to density: lower density ('urban sprawl') is associated with higher car ownership and higher car use, and with less active travel. There is also convincing evidence that good accessibility to jobs and facilities is equated with more active travel – interconnectedness (for example, easy access between homes and work) is important and there are benefits from mixed use (for example, having residential, retail and office buildings in the same location), and from avoiding dormitory suburbs and exurbs (settlements beyond the suburbs). However, it is not so easy to prove that factors such as lower density or poor accessibility actually cause a reduction in overall levels of physical activity. The locational choices of households may simply reflect their lifestyle preferences, and people may compensate for

the lack of active travel with other forms of exercise. The US Transportation Research Board concludes that:

"Few studies capable of demonstrating a causal relationship have been conducted and evidence supporting such a relationship is currently sparse. In addition, the characteristics of the built environment most closely associated with physical activity remain to be determined." [4]

The apparent lack of progress may well stem from the way in which the research is designed. Researchers are looking for patterns based on statistical averaging across a large number of settlements and populations, often using units of analysis – such as wards or census tracts – that do not represent real communities. It is arguable that such aggregate studies ignore the huge variation between places in terms of culture, form and policy and thus conceal rather than reveal.[5] Settlements of unlike character – such as free-standing market towns and commuter towns – may be amalgamated together because they happen to be the same size or of the same average density. The significance of this is highlighted by a recent study of Lincolnshire settlements which showed a 900% variation in the numbers walking or cycling to work between rural settlements.[6] There is as yet no major study which recognises such variations, or tries to explain them and relate them to policy decisions.

The discussion below examines the three key policy areas of housing, economic development and services, and transport. It attempts to illuminate the way in which strategic decisions in these three areas are likely to influence levels of physical activity in the population. It is important to note that any such influence will be socially unequal. People in higher socioeconomic groups will compensate for the lack of active travel by active recreation. This is not simply a matter of income. As Marmot has shown in *Status Syndrome*,[7] the level of social inclusion in a society is just as important for health as income is. He argues that *place*, in its broadest sense, is of critical significance for social inclusion. Strategic planning will therefore have an impact on health inequities and the health gradient.

Housing

Population forecasts, and the related decisions about the allocation of housing provision between districts and settlements, are at the core of strategic planning. The Regional Spatial Strategy (RSS) states the general level of dwellings needed, and this then determines the appropriate provision to be made within county or district plans that nest within it. Health is affected in two ways: in terms of the *availability* of housing, and its *location*. As the Barker report[8] cogently argues, the relationship between the supply and demand for housing influences not only price, but also the locational choices available to households (especially poorer households) and the flexibility of labour markets. It follows that, if households are constrained by the housing market to live in places that are far away from their main connections with shops and workplaces, this will affect their travel mode choices and their degree of car dependence. Frequently it means households living in outlying commuter exurbs and villages with few local facilities.

The study of Lincolnshire illustrates this point. The housing figures for the Lincoln area – one of the fastest growing in the East Midlands region – were set by the RSS at levels that were considerably below the building rate. The level of land release through local plans in the Lincoln area was low, reflecting the RSS levels. The result was (and is) rising prices relative to the country at large, and households being forced to locate in small settlements many miles from their work and main services, where there just happens to be surplus housing land. They are effectively forced by housing policy to live in locations where the proportion of walking and cycling trips is (for quite pragmatic reasons) less than 10%, whereas in Lincoln itself it is over 30%.

Government policy and principles relating to the main aspects of the town planning framework are set out in Planning Policy Statements. Planning Policy Statement 3 (PPS3) on housing tends to encourage 'brownfield' development over 'greenfield' – in other words, development of previously used land, usually in urban areas, rather than building over green space. This goes some way to compensate for dispersal trends forced by inadequate supply because it encourages in-town development where car dependence can be lower. However, in their eagerness to hit government brownfield targets, local authorities sometimes favour relatively inaccessible brownfield sites (often owned by the Ministry of Defence or hospital trusts) over accessible greenfield sites. Lincolnshire again provides an example, where a disused airfield some eight miles from the centre of Lincoln and lacking facilities was originally preferred over an unconstrained greenfield site lying between one and three miles from the centre.

The problem of housing undersupply (with consequent housing stress) is prevalent across the country.[8] Housing locational strategies are driven more by the need to defend the perceived quality of environmental capital (such as greenfields and most particularly green belts) than the future health of residents or the effective function of urban areas. Housing policy is exacerbating problems of social exclusion which impact on the lifestyle choices of poorer people, increasing health inequalities.

Economic development and services

Sustainable economic development is another central objective of Regional Spatial Strategies and Local Development Frameworks. From the health viewpoint this is appropriate, as both work and income are critical to well-being.[9] However, the location and spatial characteristics of employment opportunities are important for active travel. The prevailing locational preference of most local authorities, competing as they are for investment, is for sites on the urban periphery – offices surrounded by car parks. These so-called 'business parks' are typically designed for ease of car access and are inconvenient and sometimes inhospitable for pedestrians and cyclists. While government policy now actively discourages out-of-town retail provision,[10] business parks continue to proliferate – for example, the Oxford Business Park and Oxford Science Park. This trend might be exacerbated if the relaxation of PPS6 *(Planning for Town Centres)* proposed in the recent *Barker Review of Land Use Planning*[8] goes ahead.

Essentially the physical activity perspective on the location of employment and services is simple. All major trip generators – whether retail, office, leisure, educational or health services – should be located in mixed-use centres embedded within the built-up area of

the settlement they are serving, so as to facilitate access by foot, cycle and public transport, and allow pedestrian access between facilities.[11, 12] This may appear to be common sense, but there are considerable impediments to achieving it.

Transport

Transport is the lifeblood of human settlements. When the economy is doing well, there is more of it. There is therefore a strong tendency, built into national and regional policy-making, to assume that more transport is good for us. So there has been a programme of investment in road, rail and air facilities, essentially to promote continued economic growth. The growth of transport, of course, is predominantly in the form of more and longer car trips. The vicious circle of growing car dependence, land-use change to facilitate car use, and increased inconvenience of non-motorised modes leading to further rises in car ownership, with its knock-on effects on climate change, is widely recognised. There is intuitive understanding that the vicious circle is encouraging lifestyle patterns that are antipathetic to the taking of regular healthy exercise. Yet the trend continues unabated.

Despite the stated commitment to reduce greenhouse gas emissions, government transport policy at all levels continues to foster car dependence. Two examples at the level of city regional planning illustrate this issue. The first is the fondness for bypasses and ring roads. The *economic* raison d'être for them is often strong, the *environmental* factors evenly balanced, but the social equation problematic. Evidence suggests that they trigger a greater switch to the car than expected in forecasts[13] and a corresponding decline in active travel. For example, a bypass demonstration project[14] which measured walking levels in six towns in the UK before and after the construction of bypasses and associated traffic-calming in the town centres, found a significant decrease in levels of walking and cycling.

From the viewpoint of physical activity, the problem is that bypasses and ring roads lead to locational change by institutions, firms and households in order to profit from the altered pattern of accessibility. New edge-of-town facilities take over from in-town and locally-based facilities. Fewer locations remain accessible by foot, speeding up the increase in car dependence and disenfranchising those who do not use a car.

The second example is 'park and ride' (P&R). P&R has the potential benefit of reducing congestion (with its attendant air quality problems) in-town. It is often sold also as a means of promoting public transport. However, part of the effect of P&R is to increase car dependence and reduce active travel in the suburban or exurban areas it serves. It does this by taking riders away from the normal bus services, which are accessed by foot, and instead enabling people to get in their vehicles and park conveniently close to the P&R stop. Subsequently the normal services, starved of passengers, may need to be cut to balance the books, thus tightening the vicious circle even further. So, while there could be situations where P&R is part of a sustainable and healthy strategy, often it is not. Indeed it could be seen to be altogether counterproductive, contributing to increased greenhouse gas emissions and adding to the decline of small settlements.

By contrast, investment in high-quality public transport services such as light rail, routed so as to serve residential areas and main attractions efficiently, can be a positive stimulus to walking and cycling. In general, people are prepared to walk up to 1km to access a good, reliable public transport service. Yet rail travel seems to have been made more and more expensive, with car travel at least appearing to be the cheaper option for most journeys.

Why does this happen?

The main impediments to strategic planning for promoting healthy physical activity are the predictable ones: lack of awareness on the part of decision-makers; lack of knowledge; institutional inertia; perceived competing political priorities (especially economic priorities); and weakness in converting rhetoric into practice. However, the strategic planning system in itself is not the main culprit. *In principle*, the UK has impressive credentials where the system is concerned, as it has:

- generally good national policy planning guidance that promotes walking, cycling and recreational activity as part of the move towards sustainable development
- a regional spatial planning system that can be used to co-ordinate positive change in land use and movement patterns across a wide area
- Community Strategies at the local authority level that draw together different departments and agencies into debate about the future priorities
- Local Development Frameworks that can be used proactively to promote integrated pedestrian and bike-friendly development
- Sustainability Appraisal linked to Strategic Environmental Assessment that gives the opportunity for careful, systematic analysis of the health impacts of alternative strategies
- public involvement in policy-making and stakeholder consultation processes that can enable concern for a healthy urban environment to be manifest.

The problem is not so much one of structures and broad principles, but interpretation and implementation – the policy/action gap. Three factors are worth highlighting. The first is the conservatism of the market. House-builders and commercial developers are trapped by the experience of the 1980s and 1990s. They know that cul-de-sac and gated housing provision, and out-of-town retail and business parks, are profitable. It takes a brave entrepreneur to experiment with new forms. However, once the barrier is down (for example, in relation to city-centre living), more and more builders and developers will be prepared to invest in them.

Second, it is worth considering the remit of official bodies, both in the public and privatised sectors. While the Community Strategy and the Local Development Framework provide opportunities for co-ordinated action to promote a healthy environment, there is no *obligation* to do so, except in the case of the local authority itself. For example, a primary care trust can, through its own investment programme (which may involve, for example, closing down hospitals) create a situation that prejudices physical activity and social capital, and exacerbates social exclusion. The education, transport and housing

departments of local authorities need to focus more on this and the health, energy and water agencies need to have a broader remit that includes the role of promoting a healthy, sustainable human habitat.

The third factor is the degree of rationality and objectivity in plan-making. Spatial plans for an area are rightly subject to the political process and the pressure from stakeholders. But democracy (if that is what it is) can come at the price of rationality. The reinforcement of evaluation processes and the new emphasis on evidence-based plans, especially through Strategic Environmental Assessments (SEAs), in theory provide a counter-weight to the power of vested interests. SEAs have to be carried out on all strategic plans such as the Regional Spatial Strategy, and are at a more strategic level than the more focused Environmental Impact Assessments (EIAs). However, to date the experience of EIAs and environmental or sustainability appraisal of plans provide little ground for comfort. The focus is often on measurable minutiae or, at the other end of the spectrum, tick-box conjectures. In the case of Lincoln, the Environmental Impact Assessment for a major ring road proposal that would fundamentally affect the future shape of the city ignored the impacts on travel behaviour and land use, while a Sustainability Appraisal of a local plan did not address the central issue of housing allocations outlined earlier in this chapter (perhaps because it was considered 'too hot to handle').

What can be done?

There is clearly an opportunity within the current system for local authorities, with the active support of health authorities, to promote an integrated approach to creating good spatial strategies. The priority is to use Community Strategies and Local Development Frameworks to engage with all the key public, private and voluntary sector agencies. It can be argued that these agencies should have a moral obligation to be socially and environmentally responsible. They should be party to plans that promote active living and a reduction in greenhouse gas emissions. Each agency, including the major private sector developers, then needs to agree to play its role. The appraisal process can be used to ensure coherence and consistency in the plans, and help ensure subsequent compliance and review where appropriate.

If this appears utopian, it is probably because Government, despite its rhetoric, is not reinforcing healthy, sustainable policy. It is Government Departments, and the remits they give to quangos and privatised bodies, that often effectively undermine the best of intentions. Government needs to set its own house in order and strengthen the expectation, across the board, that decision-makers should work to improve human health and well-being. The Scandinavian countries provide shining examples of how integrated, consistent strategies can be applied, with unanimity of purpose across agencies, supported by consensus in the population at large. Combating the epidemic of obesity in the UK provides a goal which could be used by politicians to win widespread backing for such an integrated strategy.

Back at the city scale, the WHO European Healthy Cities programme could provide inspiration for coherent, activity-promoting strategies. Seventy-five municipalities across

Europe are committed to developing what the WHO calls 'healthy urban planning'. An alliance of health authority and local authority is central. The local authority – including planning, transport, housing, education, regeneration, economic development and leisure departments – is responsible for shaping the urban environment so that it facilitates physical activity. Public health agencies are responsible for awareness-raising campaigns or projects and for subsequent monitoring of behavioural change. In the UK, cities such as Brighton and Hove and Belfast are energetically pursuing this course. They and other cities recognise that shifting the awareness and attitudes of staff is often the pre-requisite for progress.

What has been done?

In Europe there are many examples of cities which have successfully promoted an environment – both a physical and a social environment – which is conducive to physical activity. The cycling cities of Denmark and the Netherlands (such as Odense, Copenhagen, Delft and Amsterdam) demonstrate what is possible. Freiburg in Germany has perhaps the most impressive integrated strategy – including the creation of large 'car-free' suburbs – that shows what can be achieved when the political will is there and is sustained over the decades.

Case study

Brighton and Hove

Brighton and Hove City is a member of the World Health Organization Healthy City Healthy Urban Planning Sub-network. This strategic network develops guidance to support cities across Europe in taking forward healthy urban planning objectives. A local Healthy Urban Planning Working Group brings together city planners, transport planners and public health specialists to steer the development of healthy urban planning in the city. Planners are contributing to the City Health Development Plan. This plan explains the links between city planning and health, and focuses on action to make the city a healthier place to live in.

Healthy city principles and approaches will be built into the Local Development Framework (LDF) to ensure that health is a key consideration in all planning processes and decisions. A Health Impact Assessment will inform the development of the LDF. Health is also being considered as a part of development of the Local Transport Plan, and a programme of education and development is being produced to support planners to integrate healthy urban planning principles and approaches in their work.

Action

Priority actions are in **bold**.

Government

1.1 All Government Departments should be required to apply a 'health check' to every investment programme they initiate, focusing on the impact that the programme will have on levels of physical activity and other aspects of health. This might be through a Health Impact Assessment, or a greater focus on health within Strategic Environmental Assessments. This applies particularly to the Treasury and major spending departments such as the Department for Transport, Department of Health, Department for Education and Skills, and Department of Trade and Industry.

1.2 The Government should strengthen the guidelines for Community Strategies, Local Transport Plans, Regional Spatial Strategies, Local Development Frameworks, and Sustainability Appraisal to make health and physical activity (in partnership with sustainability) a key goal.

1.3 The Government should change the remit of arms-length organisations in public and privatised sectors ('quangos' and non-departmental government bodies) to include an obligation to promote active living and reduce greenhouse emissions. This should also include organisations such as Royal Mail, health authorities, local authorities (in particular education authorities), water and energy agencies, transport authorities, Natural England, the Housing Corporation, Network Rail, and Regional Development Agencies.

Government, professional organisations and universities

1.4 The Government should promote, with professional organisations and universities, the integration of health-promoting principles in education and training for professionals such as transport engineers, town planners and environmental scientists. This should include undergraduate and postgraduate education and continuing professional development. For example:

- Transport engineering should embrace transport planning, and should recognise the promotion of active travel as a key goal.
- Town planners should have health and well-being as their prime outcome, with a focus on understanding the development needs of each age group and type of household, based on real knowledge of travel behaviour.
- Environmental scientists (who are involved for example in Sustainability Appraisals or Environmental Impact Assessments) need to gain greater understanding of what makes for a healthy human habitat, and rebalance assessment so that human health is properly valued.

1.5 Public health training needs to embrace an understanding of what makes for healthy towns and cities, so that public health specialists can be actively involved, for example, in developing Community Strategies and Local Development Frameworks.

2 Urban planning

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Urban planning: what's the problem?

The location of different land uses relative to one another (for example, residential, retail and offices) and the amount of development in any given location both have a strong impact on how people travel. So, too, does the quality of provision for different types of movement. If someone lives a long way from their place of work, their school or their nearest shops, they are less likely to walk or cycle between their home and that destination. If the number of people living in a given place is small, the number of shops and services (dependent on local demand) within walking distance will be few. If the route is indirect, difficult, unfriendly, unsafe or fraught with delay, then walking and cycling will still be unattractive options, even if the two ends of a trip are in reasonable proximity.[15]

Three relatively recent additions to the jargon of urban planning – 'mixed-use development', 'density' and 'walkability' – give an indication of the nature of the three main problems that face urban planning: single-use development, low densities, and poor walking and cycling routes.

Mixed-use development describes places, whether new or old, where more than one land use can be found in the same location, or even in the same building. We are familiar with the basic idea from traditional town and city centres where retail, leisure and employment opportunities are located in the same areas as where people live. But mixed-use development seems like a new idea because of decades during which the vogue was for the creation of 'single-use' areas – for example, residential areas, retail malls or plazas, business parks and leisure campuses – which were generally predicated on easy access by private motor vehicles and where proximity to one another was purely coincidental.

Density concerns the general principle that the more development there is per unit area, the greater demand there will be for services and facilities in the vicinity. It also has to do

with compactness: denser residential development will create the demand for more local shops, and each dwelling will, on average, be closer to the shops in question. Historically, buildings in towns and cities tended to be quite densely-packed as a result of both the price of land and the desire for short trips between buildings. The growth in personal mobility that came with private cars, and also with better bus and rail services, allowed people to live further from centres, where lower land prices meant that the same unit of expenditure could purchase more space. On the whole, there remains a tension between the individual's desire for space and the greater density required by the sustainability and health agendas.

Walkability[16] refers to the general attractiveness of a place to movement on foot and is characterised through reference to the '5 Cs'. Are walk routes connected, comfortable, convenient, convivial and conspicuous? The contemporary focus on these qualities is the justifiable reaction to the decrease in walkability that resulted from decades of planning during which provision for pedestrians, and indeed cyclists, was prioritised way below that for motor vehicles. The granting of planning permission for development was often dependent on the submission of a Traffic Impact Assessment that showed how the developer proposed to accommodate the vehicular traffic generated by the development. However, no comparable assessment of provision for movement by other modes was required. This meant, for example, that junction design focused on minimising vehicular congestion. As long as pedestrian movement across the junction was physically possible, that was considered sufficient, even if the route provided incurred significant delays or took pedestrians away from their 'desire line' – the line they would naturally take if able to.

It is important that the current shift towards mixed-use development, increased densities and greater walkability becomes firmly established in planning policy and process, and is not merely a fashion that fades. The economic and cultural forces that gave rise to single-use developments and to the predominance of motor vehicles have not disappeared and the need to control them will remain.

Why does this happen?

Each of these three problems – single-use development, low densities, and poor walking and cycle routes – has a number of contributory causes. Established custom and practice, and generally conservative attitudes, are common to all.

Perhaps the main reason for the popularity of single-use developments is that developers perceive them as easier and more profitable to build. Mixed-use development is inherently more complex and therefore unattractive to risk-averse and cashflow-driven businesses. Different forms of development may hold out the prospect of greater returns, but developers confident of a given return from a familiar type of development will tend to play safe. There is also the matter of increasing specialisms which mean that, for example, volume house-builders are reluctant to step out of their sphere of expertise and incorporate employment or retail uses within their developments. The market also has a very strong influence, although what customers want is itself heavily influenced by what has been made available. A profusion of large retail and business parks with shelter

from the elements, manicured lawns, easy access from the motorway and plenty of free parking does not encourage people to consider the virtues of any alternatives.

Low-density development is the result of similar causal factors. A huge retail shed is cheap to build and simply cannot physically support development above. Moreover, most single-use development has been characterised by generous amounts of car parking and, where land is relatively cheap, developers consider it far more cost-effective to provide this at surface level. Easy parking is also, of course, what customers or other users are familiar with and therefore what they tend to value. Most people, if asked, would prefer a detached house with a garden to a flat in a block, and therefore this is what developers have tried to provide, seeming to ignore that what people also value is location.

The main reason for poor provision for the 'healthy modes' of travel such as walking and cycling is, quite simply, that developers and planning authorities have tended to accord movement on foot and by bike far too low a priority. This was not the result of a positive decision to discriminate against these modes, at least among planning authorities. Rather, it simply became a default option, an unthinking acquiescence to the notion that 'the car is king'. If walking or cycling between two points is possible, even if not attractive, that has tended to be regarded as a satisfactory state of affairs. By comparison, the provision of good access by car has often defined the nature and layout of new development since World War Two. Whenever a development design is criticised as 'not working' in transport terms, this has been synonymous with the identification of delays for movement by car. Until recently, the failure of a design to 'work' from the perspective of walking or cycling was rarely, if ever, regarded as critical.

It is only since the 1990s that the planning policy tide in the UK has turned decisively in favour of mixed use, higher density and the healthy modes of transport (as seen, for example, in Planning Policy Guidance Notes 6 [17] and 13 [18]). Nevertheless, the application of this policy remains sporadic and often half-hearted. The tools are available, but they too often remain in the toolbox.

What can be done?

If the planning tools are available, it may be thought that all that is needed is for them to be used more consistently. However, in the first place, that is easier said than done. For example, while Planning Policy Guidance Note 13 on Transport (PPG13) encourages a far less car-focused transport policy, it still gives enough scope for planning authorities to accept development that does little to promote non-car travel, if other (e.g. economic) priorities are to the fore. Secondly, the planning policy tide may be weakening in the face of opposition. For example, the Government's new Planning Policy Statement 3 (PPS3) on Housing,[19] is by no means a significant step forward from its predecessor, Planning Policy Guidance Note 3 (PPG3).

The key is to deliver more development that encourages walking and cycling, to identify the benefits of such development to all (including the developers), and to let the story be told. Only then will priority be given to mixed use, higher densities and greater walkability and bikability, and will the available planning tools be used more effectively and enthusiastically.

When people see the attractions of living, working and playing in different kinds of places, they will want to live, work and play in those kinds of places. When developers are able to examine examples of where unfamiliar forms of development have reaped additional profits for their competitors, their concerns about risk will diminish. When planning authorities know that their peers have successfully negotiated forms of development that they themselves have in the past struggled to insist on, their confidence in adhering to planning policy guidance will be increased.

Types of development where it would be particularly beneficial to have examples of successful practice include the following.

- Residential development with low or no parking provision, justified by good access to public transport and enforced through effective control of on-street parking in the neighbourhood.
- Major retail floorspace, including food superstores, with several storeys of office, residential and/or leisure development above.
- Dense, mixed-use development (e.g. commercial and residential with supporting retail) in transport development areas, i.e. sites on top of or very close to powerful public transport hubs.
- Dense forms of residential development suitable for families – successfully dealing with the demand for leisure space that families generate.
- New development of any kind where attractive and effective walking and cycle routes have been successfully delivered both on-site and in the neighbourhood, through development agreements and partnership working.

Additionally, a stronger, less equivocal national planning policy basis is needed. Although planning authorities currently have adequate policy support for requesting a better mix of uses, higher densities and greater walkability, there is sufficient flexibility for hesitant authorities and unwilling developers to enable the delivery of development that meets none of these objectives if they choose to do so. Without undermining local democracy, central government could and should issue tougher policy guidance on key aspects, make such guidance less avoidable, and provide planning authorities with the necessary resources and support to ensure the policy is delivered.

A clearer sense of common purpose and genuinely joined-up central government thinking and policy would also be very welcome. Mixed messages from central government can often compound problems. For example, the Office of the Deputy Prime Minister (now the Department for Communities and Local Government) has promoted a far more holistic approach to the design of streets and spaces, while the Department for Transport's funding regimes and general outlook continue to work against the implementation of holistic approaches in the public realm.

What has been done?

Case study

Brindley Place, Birmingham

Started in 1993 and now almost complete, at 17 acres Brindley Place is the UK's largest mixed-use development. It includes 1.1 million sq ft of office space, 330,000sq ft of retail, catering and leisure facilities, 2,600 car-parking spaces, 143 canalside homes, a hotel, two new public squares, and the restoration of the Oozells Street School building to incorporate an art gallery. Inventive land assembly, creative funding packages, and speculative and leveraged development undertaken in the context of tumultuous property-market conditions have been the background to Brindley Place's success. Underpinning it was Birmingham City Council's unwavering commitment to urban design principles, adopted in 1990, which has created high-quality design that goes hand in hand with commercially viable, privately funded regeneration.

Case study

Tesco, Cromwell Road, London

This is a large food superstore at a prime location in west London, but is far from being a 'big box' located behind a sea of car parking. Above the store is a combination of residential and office space, incorporating 75 flats – homes for key workers with balconies and unsurpassable views of urban landscapes. This mixed-use scheme was the first phase of a three-phase development granted planning permission in 1996. In September 2005 a planning application was made for an additional residential scheme to be built on the existing podium above the Tesco car park. The proposed new development is 340,000sq ft and consists of 433 apartments in 27-storey and 10-storey buildings, with a health club at entry level to the building. In addition to the luxury apartments on the upper floors, the lower part of the building will include 40% affordable housing. The scheme also includes new car parking and landscaped gardens and, if successful, will replace the existing consent for a tall office building on the site and will be completed in March 2009.

Case study

Car-free sustainable housing, Slateford Green, Edinburgh

This development, completed in 2000 and built on a former railway goods yard, comprises 120 residential units (69 rented, 25 low-cost home ownership and 26 for sale) and a community hall within a two- to four-storey perimeter block. Being on the west edge of the city centre, close to Haymarket station, numerous bus routes and a range of local facilities, it was felt to be an ideal site for car-free development. The space that would have been used for parking was used instead for gardens, children's play areas and allotments. A planning agreement with the developer required it to impose obligations in each tenancy agreement by which the tenant undertakes not to park any vehicle within the development. The development incorporates a City Car Club (a joint venture between the local authority and a car rental firm) that gives members access to vehicles that can be hired locally by the hour.

Action

Priority actions are in **bold**.

Department for Transport

2.1 The Department for Transport (DfT) should require local authorities not only to adopt the policy of prioritising pedestrians and cyclists in their transport policy statements, but also to produce an assessment of whether they have delivered that aspect of the policy as part of their annual plan (whether Local Transport Plan, Borough Spending Plan or local implementation plan). This should include a breakdown of transport (and other) expenditure by transport mode benefited. Accordingly, the DfT should increasingly allocate proportionately more funds to supporting walking and cycling.

2.2 The requirement for stand-alone Travel Plans for all significant trip-generating developments should be scrapped. Instead, Transport Assessments should be based on the achievement of a set proportion of journeys by each mode (e.g. walking, bike or car) to be agreed with planning authorities early in the planning process. Too many Travel Plans are added on to the end of Transport Assessments and never acted upon. The initiatives in Travel Plans should be serious proposals which feed into the trip generation and modal split assumptions of the Transport Assessment itself.

Government

2.3 The Government should update Planning Policy Guidance 13. A new Planning Policy Statement 13 should provide a much more robust basis for limiting car-dependent development, for using parking controls as a tool to discourage unnecessary car travel, and for promoting travel by non-car modes.

2.4 The Government should sponsor the development of a robust and meaningful methodology for assessing the public transport accessibility of any given location. Current methodologies such as average walk times to bus stops are inadequate, although they do at least establish the principle. The Government should then require local planning authorities to define their areas in terms of public transport accessibility and to adopt minimum requirements for development types and densities (and maximum permitted parking levels) for each accessibility level. This will help to ensure that highly accessible areas are developed in ways which fully use the public transport services that are available, and discourage car ownership accordingly.

2.5 The Government should commission or support research into, and dissemination of, good practice as regards the successful combination of low-car or car-free development, the introduction of new local on-street parking controls (e.g. through Section 106 agreements), and the acceptance of legal agreements preventing occupiers of the new development (e.g. residents) from obtaining parking permits for such controlled areas.

Local authority planning departments

2.6 Local authority planning departments should require promoters of residential developments above a certain threshold size to prepare a statement explaining how residents would be able to walk, within a specified time, to a specified range of local services and facilities – for example, to a food shop, primary school or health centre. In due course, it should no longer be possible to build new homes in or on the edge of urban areas where the private car would be the only genuinely attractive option for travel for such basic needs. Such a policy tool could have a similar effect on residential development to that of the 'sequential test' on retail development (in which certain types or locations of land are developed before others, such as brownfield land before greenfield sites).

3 Streets and the public realm

Ben Hamilton-Baillie
Director, Hamilton-Baillie Associates Ltd, and a member of the CABE enabling panel

What's the problem with our streets?

The quality of our streets and public spaces continues to decline. Despite local policies to prioritise walking and cycling, and impressive initiatives such as the UK's National Cycle Network, public dissatisfaction with British streets as a whole continues to increase.[20] Streets make up the most accessible and familiar component of our shared public space – what is often referred to as 'the public realm'. The poor quality of our streetscapes has important effects on communities, travel patterns and lifestyles. As streets become less attractive, people are less inclined to spend time in them for social activities. Walking and cycling become less attractive, public perceptions of safety decline, and activities such as play transfer from the public realm to private space.

It is difficult to quantify the effect that a decline in quality of the public realm has on people's physical activity levels and their health. The increase in sedentary lifestyles has been well documented, especially the change in children's travel patterns, with children making fewer walking and cycling trips and more journeys by car.[21] However, it is important to note that many different factors, including the decline in the quality of the public realm, may have contributed to this. There is even less evidence on the wider relationship between the environment and health, especially on the links between the public realm and mental health. While traffic volumes and travel patterns are relatively well documented, the informal use of streets and public spaces has rarely been the subject of analysis.[22] However, it is a reasonable hypothesis that an incoherent and unattractive public realm does not promote general health and well-being.

It is easy to speculate what it is about UK streetscapes that makes them so unattractive as places for informal public activity and human presence. Take a snapshot of the 'centre' or focal point of almost any neighbourhood, town or village, and it is likely to be dominated by the standardised features associated with conventional traffic engineering. (See photo on next page.) White lines, yellow lines, zig-zags and garish cross-hatching

will characterise the asphalt of the horizontal plane. Traffic signals, road signs and steel pedestrian guard rails will fill the vertical plane. Busier roads will have underpasses or overbridges. Concrete kerbs, barriers and traffic islands will fragment the space, isolating small residual spaces for pedestrians from each other and from the traffic. Compensatory measures for people with visual or physical disabilities, such as drop kerbs, standardised tactile paving and beeping pedestrian crossing signals add to the visual and audio confusion. Our streets are not welcoming places.

Many town centres are dominated by the standardised features associated with conventional traffic engineering.

Many noteworthy examples of urban regenerations have begun to restore confidence in busier city centres and brought a welcome interest in the potential for lively public spaces. But successful schemes are the exception, not the rule. At the other end of the urban spectrum – on quieter residential streets – a few celebrated (and usually expensive) home zones have raised expectations for new relationships between people and traffic. Between these two extremes, the average High Street, ring road or village centre is at best tolerated, at worst avoided by most people seeking pleasurable human interaction. The problem is especially evident among the poorer sectors of society. More articulate communities have the resources, stamina and energy to do battle with traffic engineering authorities to restore distinctiveness to their neighbourhoods. In deprived neighbourhoods, the public realm is not considered an attractive enough place for fostering informal physical activity such as walking or cycling, or for interacting for pleasure.

Why has there been a decline in the quality of the public realm?

The streets and public spaces that make up the public realm of our cities, towns and villages have always had to serve a multitude of purposes essential to our social, cultural and economic needs. These purposes fall into two broad categories: those associated with movement and transport, and those associated with social exchange and interaction. The balance between these two complementary functions on the one hand, and the nature, design and use of the public realm on the other hand, appears both to

reflect and to determine our social values, and radically affects our activity patterns and behaviour.[23]

The introduction of motorised vehicles during the 20th century posed new challenges for the way we use the public realm. The ability, and desire, to move vehicles at greater speeds and in greater volumes gave rise to new ideas, technologies and policies aimed at balancing the need for safety and accessibility. Traffic engineering developed as a discipline focused closely on the efficient movement of motor vehicles. It has become separate from those other professions responsible for the public realm – such as architecture, landscape and urban design – with its own training, philosophy and practice.

Increasingly, streets came to be regulated by governments through the use of consistent, standardised control mechanisms of highway rules, control systems and markings. In 1963, the Buchanan report, *Traffic in Towns,*[24] established the key policy framework for streets. Central to its conclusions was the need to segregate traffic movement from social exchange and interaction. The principle of separation and segregation has continued to guide policy in relation to our built environment ever since, both in the UK and across much of the developed world.

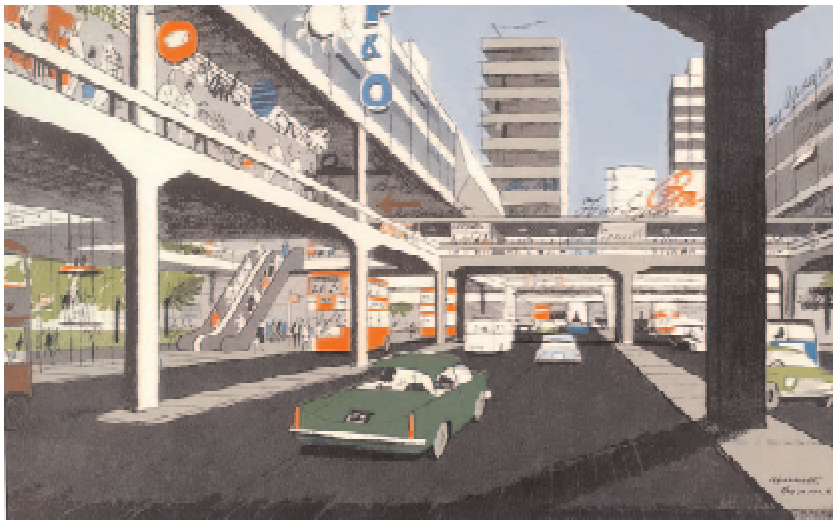


Illustration from the *Traffic in Towns* report,[24] published in 1963, which concluded that there was a need for segregation of traffic movement from social exchange and interaction

In recent years there has been an increasing recognition of the widespread, unforeseen implications of a policy of segregation. Segregation would appear to be at least partly responsible for the rapid decline in levels of walking and cycling. The need for underpasses, overbridges, traffic signals, barriers and controls, implicit in achieving segregation, has reduced accessibility for non-motorised traffic. Isolation, inequalities, and a fragmented, degraded public realm were outcomes not anticipated by Buchanan and his team. As well as having detrimental effects on health from reduced options for movement, the policy of traffic segregation has not appeared to deliver the safety benefits anticipated. Pedestrian casualties, especially among children in more deprived neighbourhoods,[25] continue to be a cause for concern. An increasing understanding of behavioural psychology and the phenomenon known as 'risk compensation effect' (which is explained in more detail on the next page) may explain the persistent problems of road safety that accompany the broader health implications of current traffic policy.

What can be done to promote successful public spaces?

It is essential to bring together the two disciplines of city planning and traffic engineering in order to achieve a joint understanding of the multiple purposes of streets and public space and to integrate the complex functions. The schism extends to government organisation: the Department for Transport is responsible for streets, while the Department for Communities and Local Government is responsible for urban policy and public space.

It is necessary to establish a universally recognised type of space that is clearly distinct from the established 'highway', in order to encourage the creation of the type of streets and public spaces that promote the informal, spontaneous activities associated with physical and mental health and well-being. The 'highway' is highly regulated, consistent, and serves only a single purpose. This is not to argue that cars and vehicles need necessarily be removed from the public realm. But increasing numbers of examples suggest that the removal of the familiar characteristics associated with the highway – such as road markings, traffic signals, signs, kerbs, bollards and barriers – can dramatically change the relationship between people, places and traffic. In the absence of rules, predictability and certainty, drivers have to rely on cultural signals and informal social protocols. Speeds reduce and the driver becomes a part of his or her surroundings and context.

Reduction in the speed of traffic is the single most important measure to permit the use of streets and public spaces for multiple purposes.[26] Numerous studies of the relationship between traffic speed and pedestrians suggest that a distinct change occurs at speeds somewhere around 20mph (30kph). It is probably no coincidence that 20mph is close to human evolutionary design speed; our skull thickness and physiology are of such a size that they can sustain impact below our maximum running speed. Conventional policy on highways in the UK has assumed a legal limit of 30mph, and traffic engineers have designed for speeds of around 35mph. Designing for lower speeds, appropriate to the human context of streets and public spaces, is the most critical measure to restore the balance between people and vehicles. Interestingly, empirical evidence also suggests that journey times for vehicles improve at lower speeds, due to greater efficiencies at intersections.

Achieving lower speeds does not require an increase in regulatory controls, enforcement, or conventional interventions such as traffic-calming. On the contrary, removing the legal and state-defined controls appears to allow the much more powerful social behavioural constraints to come into play. The less the manifestations of 'the highway' are evident, the more drivers rely on their remarkable ability as humans to read situations and adapt to circumstances. As Engwicht has pointed out, traffic speeds are determined, above all else, by what he termed the 'degree of psychological retreat from streetspace' [27] – the extent to which we simply use streets as a means to an end, rather than using them as a place for social interaction. Reversing such a retreat requires street designers and users to grasp every opportunity to ensure human presence and activity in the spaces between buildings.

The greatest cultural change necessary to restore spontaneous human activity in our public realm is a fresh understanding of the importance of accepting risk as an essential component of activity and interaction. The policy of segregation, so central to urban traffic engineering, has assumed that risks should be minimised in pursuit of safety. But as Adams and others have pointed out, risk is essential to human activity, and hence to the creation of successful public space.[28] A recognition of the 'risk compensation effect' prompts a fresh understanding of the adverse effects of measures such as traffic signals, signs, pedestrian guard rails and barriers on safety, and on their tendency to discourage informal physical activity. It may seem perverse to argue that health can be improved by making spaces feel riskier, but that is the firm conclusion both from research and from empirical studies.[29]

Interesting echoes of Adams' observations concerning the importance of risk are seen in findings on the relationship between the attempts to design out risk from children's play equipment, and the activities of children. The *Daisy Chain* survey of 2002 by the Children's Society and the Children's Play Council[30] noted that extensive investment in 'safer playgrounds' had achieved no measurable improvement in child health or safety. It had merely transferred the problem elsewhere, either shifting activity to more dangerous locations, or reducing children's levels of activity.[31]

Likewise the removal of 'pedestrian safety barriers' in the recent renovation of Kensington High Street in London (against the advice of safety engineers) appears to have significantly reduced the accident figures for pedestrians.[32] By increasing the apparent risks, the behaviour of both drivers and pedestrians appears to have adapted, causing both to be more engaged with their surroundings. Levels of pedestrian activity in Kensington High Street have also significantly increased.

Breaking down the 'conventional divide' between traffic engineers and the design professions requires decisive changes in the organisational structure of local and national government. In addition, a fresh appreciation of the value of risk and the nature of safety means that standard processes, such as adoption of standards and safety auditing, need fundamental rethinking. Health and well-being are so closely and intricately linked to every aspect of our lives that the 'single-issue' method of evaluating public space is no longer appropriate. Transport assessments, safety audits, environmental and aesthetic considerations cannot be isolated from each other or from health assessments. They are all critical to patterns of physical and social activity, and need to be linked together.

The awareness, acceptance and implementation of the principles of shared space, and the creation of a public realm free of barriers for simple day-to-day movement and interaction, are essential if we are to achieve a step change in the quality and coherence of the UK's public realm. Pioneering examples in the UK and in mainland Europe suggest that the cultural, political and institutional hurdles to redrawing such maps are less daunting than is often feared. The time seems right to underpin the range of related initiatives aimed at changing habits and behaviour through a fundamental step to linking the space between our buildings into a coherent, continuous and life-enhancing public realm.

What has been done?

The principles underpinning the integration of all aspects of movement and interaction into the design and management of streets have been evident for at least 30 years in mainland Europe. Early 'woonerven' (or 'Home Zones') in the Netherlands focused around new approaches to the design and management of residential streets. In recent years the term shared space has been increasingly applied to places where traffic has been successfully integrated into busier cities, towns and villages. The most notable examples are found in Denmark, Sweden and the Netherlands, although there are examples in almost all European countries. The principles are relatively new to the UK, but there are already enough examples to encourage further research, training and application of the approach.

Case study

Drachten, the Netherlands

The best documented example of shared space is the remodelling of a number of intersections in the Dutch town of Drachten. The busiest intersection, the Laweiplein outside the city's theatre, was previously a conventional, large, traffic-signal-controlled intersection handling around 20,000 vehicles a day.[33] The surroundings of this busy junction were drab, and the wide approach roads were congested and dangerous, and did little to foster civic activity. Pedestrian and cycle routes were inconvenient and unattractive.

The reconstructed square includes a compact roundabout that forms an integral part of a coherent piece of public space. Vertical water jets unite the space, their height responding to the volume of traffic. Despite the volumes of traffic, the informal protocols that have emerged spontaneously among drivers, cyclists and pedestrians allow free-flowing movement and a lively, animated public realm to emerge. The fountains attract human activity – especially children's play – close to vehicles manoeuvring around the central island. The proximity helps to slow traffic, which in turn improves the traffic flows. After three years of operation, the new arrangement has succeeded in creating a space that encourages public life. [34]

Laweiplein, in Drachten, the Netherlands

BEFORE

and AFTER
The fountains promote activity.

Case study

Blackett Street, Newcastle-upon-Tyne

Blackett Street, in the centre of Newcastle-upon-Tyne, was remodelled in 2001 to allow pedestrians and cyclists to move freely among the delivery traffic, taxis and high volume of buses that move through this lively urban space. There are no physical barriers or formal pedestrian crossings, yet injury accident rates have declined despite an increase in the volume of pedestrians.[35] An informal protocol with the bus companies retains bus speeds at around 10mph.

Blackett Street,
Newcastle-upon-Tyne

Case study

Seven Dials, Covent Garden, London

In the heart of Covent Garden, the busy Seven Dials intersection is a small but effective example of shared space. In place of traffic signals, highway markings or a conventional roundabout, the space was remodelled in 1996 to encourage human presence at the foot of the column in the centre. Some drivers use the monument as a roundabout, while others use it as an intersection. The element of uncertainty, and the relaxed informality in the way the space responds to the weather and to the surrounding pubs and cafés, create a memorable, safe and efficient traffic intersection and piece of public realm.

Seven Dials, Covent Garden, London

Numerous schemes in Denmark, Germany, Spain, Sweden and the Netherlands have inspired the application of shared space in the UK. Highway authorities, including Devon, Dorset, East Sussex, Hampshire, Kent and Suffolk County Councils, several London boroughs as well as unitary authorities such as Bath and North East Somerset, Edinburgh, Manchester and Newcastle are introducing shared space as a key policy component to bring together aspirations for combining efficient traffic circulation, a shift of modes of transport to walking and cycling, enhancement to the public realm and improved health.

Action

Priority actions are in **bold**.

Government

3.1 The Department for Transport and Department for Communities and Local Government should carry out a review of their guidelines for the design of streets, public spaces and rural lanes, following on from the recent publication of the *Manual for Streets,* which gives guidance on effective street design. This should emphasise the principles of shared space, and the creation of a public realm free of barriers for simple day-to-day movement. The *Manual for Streets* should be expanded to cover higher-order streets and roads.

3.2 The Government should give local authorities discretion to design streets appropriate to local circumstances and context. The Government should have central control over design standards only for motorways and trunk roads, and the Traffic Signs Regulations and General Directions order should be revised so that it does not apply to the urban environment.

3.3 The Government should transfer responsibility for streets and public spaces from the Department for Transport to the Urban Policy Unit within the Department for Communities and Local Government, which in turn should develop close working arrangements with the Department of Health.

Local authorities

3.4 Every local authority should be encouraged by Government to publish a 'public realm strategy', which encourages the informal and unconstrained use of streets and public spaces. Many local authorities already have a good public realm strategy, including Kensington & Chelsea, Southwark, and Nottingham City Council.

3.5 Local authorities should take action to break down the conventional divide between traffic engineers and urban design. This should be done by introducing new organisational structures, new training arrangements, and fresh approaches to professional definitions. Procedures such as 'safety audits' and 'risk assessments' should be radically overhauled to take account of findings relating to risk compensation.

3.6 Local authority planning departments should give their support to key exemplar schemes that involve local participation in the management and maintenance of

streets and public spaces, in order to build confidence among the public that a civilised public realm is a realistic possibility. Such schemes should include not just urban centres but also rural villages and suburban communities. There is no shortage of enthusiastic candidates among communities across the UK.

Professional organisations

3.7 Professional associations such as the Institute of Highway Incorporated Engineers (IHIE), the Institution of Highways and Transportation (IHT), and bodies such as the Royal Institute of British Architects (RIBA) and those representing the design professions need to make major changes to adapt their organisations to respond to a policy based on *integration* of traffic movement and social exchange and interaction rather than *segregation*. This should be based on the concept of a 20mph speed limit in built-up areas. Welcome initiatives by English Heritage and CABE (the Commission for Architecture and the Built Environment) have begun to combine the training of both sides of the divide.

3.8 Changes should be made to the education of urban planners, urban designers and traffic engineers to focus on the relevance of the public realm for the health agenda. This may also be part of the remit of the Academy for Sustainable Communities in their role of advancing the Egan report,[36] which considered the skills needed to help deliver the vision and aims of the government's Sustainable Communities Plan.

3.9 Local authorities should give their support to successful UK examples of attempts to improve the public realm. In addition, there needs to be further publicity and public discussion of the experience of mainland Europe in this area. This would significantly increase both awareness and confidence in local ability to transform and improve public space.

4 Walking and cycling

Philip Insall
Director of Active Travel, Sustrans

Walking and cycling: what's the problem?

In the Netherlands, both men and women aged 60 and older make approximately a quarter of their trips by bicycle, and a similar number of trips on foot. Across all age groups, the active modes account for almost exactly the same number of trips as private motorised transport, the mode with the lowest active component.[37] In contrast, in Great Britain, twice as many trips are made in private motorised transport as are made by walking and cycling combined.[38]

Walking and cycling have seen a sustained decline in the UK over the past 50 years, in line with much of the developed world.[39] This decline is consistent with that seen in other areas of physical activity, as UK society has become wealthier, more leisured and better equipped with labour-saving devices.[40] In 1950 there were fewer than 2 million cars registered in Great Britain. By 1994 this figure had risen to over 20 million, and by 2004 to 25 million. In 1951 only 14% of households had access to a car, by 1969 it was 50%, and by 2003 it was 74%, with one household in every 20 having three cars.[41] Further evidence of greater use of the car can also be found in the growth of the proportion of adults registered to drive a car. Between 1975 and 2004, this increased from 48% to 70% of adults.[42] This growth in motorisation not only shifted the balance towards sedentary forms of travel; it has also created a car-dominated road environment, which feels hostile and unattractive to the pedestrian and cyclist.[43]

Policy-makers and planners in transport, land use and development control have tended to create transport systems which favour the car. Furthermore, much of the transport policy, guidance and research has taken into account only motorised transport (both private and public), and has ignored walking and cycling. This distortion was exacerbated by the failure of the National Travel Survey during the 1970s and 1980s to record journeys under 1 mile, the majority of which are still undertaken on foot.[44] As towns and cities were replanned on an assumption of universal motor travel, journey distances have

become longer and services less accessible.[45] At the same time, motor travel became cheaper in real terms, while public transport increased in price.[46]

- Between 1992/94 and 2004, the number of walking trips per person per year in Great Britain fell by one-fifth.[38]
- Over the same period, cycle use also fell by one-fifth (trips), or by 6% (distance).[38]
- In 2004, 65% of trips were made by private motor transport, either as driver or passenger, 25% were made by walking, and 1.5% by cycling.[38]

Why has there been a decline in walking and cycling?

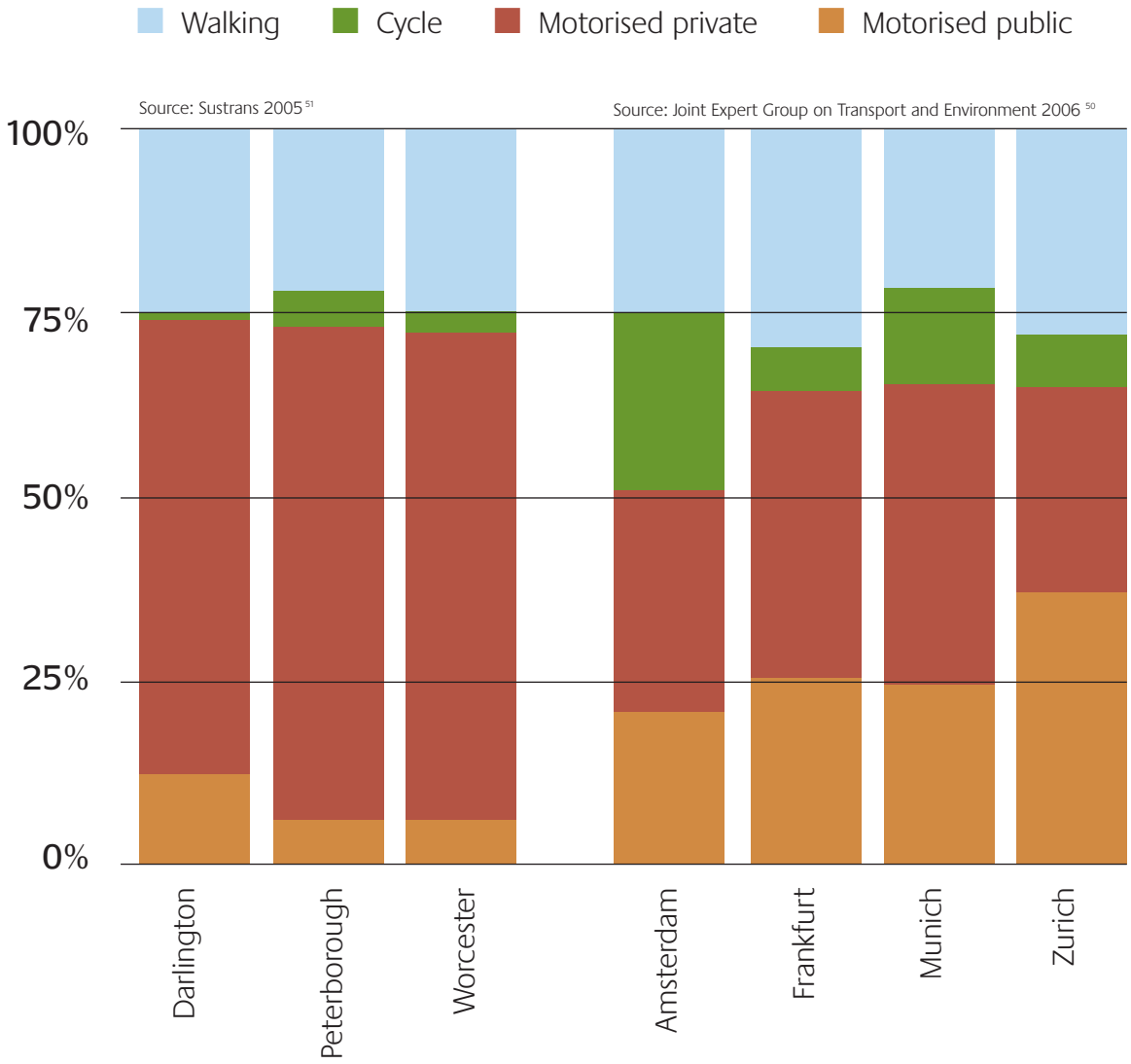
A number of inter-related factors have contributed to the decline in walking and cycling, including the following.

- A long-standing and systematic failure to measure, record and analyse the share of the transport pie occupied by walking and cycling. Policies and measures, and their performance monitoring, have often listed only the motorised modes of travel.[47] However, the Department for Transport is now reviewing its approach to monitoring and analysing walking and cycling traffic, which holds out hope for the future.
- Misperception by politicians and decision-makers as to the public's willingness to accept a shift of priority away from private motor transport. Fifty per cent of European Union citizens feel that political decision-makers perceive their public to be more pro-car than it actually is.[48]
- Failure to link policy-making in different sectors. A shift from the car towards walking and cycling would contribute to objectives in physical activity, public health, reducing healthcare costs, climate change, emissions reduction, social inclusion, quality of life, tackling antisocial behaviour, and even security of energy supply and balance of payments.
- A disproportionate focus on large projects in the transport policy sector. Large projects are easier to manage and deliver, per pound spent, but tend to address motorised – and often long-distance – transport.
- Poor planning of location and access – for example, by employers, service providers, and the NHS – making it more difficult for staff and visitors to walk and cycle; and failure by planning authorities to apply best practice in addressing these issues.
- A (generally unintentional) bias towards motor traffic in organisational practice, for example in the provision of heavily subsidised car parking to enable NHS staff to park free or at greatly reduced cost, without comparable benefits for non-driving staff.[49]

What can be done?

It doesn't need to be like this. Other, comparable European countries achieve much higher levels of cycling, in particular, and often better performance across the whole range of sustainable modes including walking, cycling and public transport. (See Figure 1 on the next page.)

Figure 1 **Trips by mode in selected European cities**



First, the debate needs clarification. There is evidence, for example, that the public is in favour of transport policies that support walking, cycling and public transport, even if these disadvantage the private car.[51] This evidence needs to be made more widely available.

Secondly, there is a need for clear political leadership, and for this to be cross-sectoral. Ministers, council members and other official figures should ensure that they put walking and cycling at the top of their priorities – not just in the wording of policies, but also in the guidance for implementing them. They should ensure that all the policy areas to which walking and cycling can contribute are working together. Furthermore, they should lead by example, acting as walking and cycling role models as they would seek to do in other areas. There is also a need for senior figures in public health, commerce, academia and other sectors to act as role models by visibly and regularly walking and cycling.

As a nation we have invested heavily in facilitating the sedentary forms of transport (which are also those which pollute, contribute to climate change, sever communities and cause road casualties). This balance should now change, with investment priority being given to active and clean modes such as walking and cycling. European countries and cities which have successfully promoted cycling, in particular, have done so by

investing at a level commensurate with the priority they attach to clean and healthy transport. For example, in Copenhagen in 2002, of a DKK 60 million budget for roads (approximately £5.4 million), one-third was allocated to improving cycling conditions.[52]

The public sector should immediately address the impact it has on the travel behaviour of its staff, visitors and neighbours. Local authorities, the NHS and others need to take the lead, eradicating policies and practices which support or subsidise sedentary, motorised modes of transport, and should measure and report on how effective they are in promoting active travel.

What has been done?

The National Cycle Network and the London Congestion Charge are, arguably, the most effective recent environmental interventions in the UK supporting walking and cycling. Numerous other examples, both national and local, are listed in the Department for Transport report *Walking and Cycling: Success Stories*.[53]

Case study

The National Cycle Network

The design and implementation of the UK National Cycle Network are based on the principles established in other countries, notably Denmark, the Netherlands and Switzerland. Over the ten years up to 2004 just over 10,000 miles of Network routes have been agreed and developed, in broadly equal proportion between completely traffic-free routes, quiet lanes and traffic-calmed urban roads.

Key outcomes (2005 data) were:[54]

- 232 million trips were made – half of them walking and half cycling. (This figure excludes walking trips on road sections of the Network.)
- The number of trips increased by 173% since 2000. (The Network length increased by 123% between July 2000 and June 2006.)
- 36% of trips could have been made by car.
- 72% of users claim to be more active thanks to the Network.

- 10.7 million cycle trips were made by new or returning cyclists.
- 9% of users were from black or minority ethnic groups.
- Cycling trips by women increased faster than average; and there was a higher percentage of women on more heavily used routes.

Sustrans believes that the profile of the Network, its visibility through signage, maps, information and marketing, and the official support for it have been very important in encouraging new and returning cyclists. It is not so easy to demonstrate that people who were previously inactive are walking more, but in years to come, Sustrans hopes to address this issue.

The achievements of the National Cycle Network were recently recognised by the World Health Organization (WHO) which awarded the National Cycle Network a WHO Counteracting Obesity Award.

Case study

The London Congestion Charge scheme

Many significant public health interventions are initiated by non-health actors and for non-health objectives, including some within the transport sector.[55] The London Congestion Charge is an iconic example of this. Its primary objective was to address the ever-increasing congestion problem which was hampering business and damaging London's status as a world city. Despite lobbying by the public health sector, the potential health benefits were largely overlooked during the planning and implementation of the scheme, and when campaigners voiced their opposition before the launch of the scheme, the NHS was noticeably absent from the scheme's supporters.

Unfortunately, parallel monitoring programmes were not established to measure the impact of the Congestion Charge on walking and cycling levels. There are some data, but they are less extensive than might have been the case with better planning.

One major strength of the Congestion Charge – missing from so much national policy and practice in this area – is its long-term incremental nature. Two and a half years after its implementation, the Charge area was widened and the cost level raised. This is fundamental to a behaviour change programme, as it means that the public can take decisions about their future behaviour based on a firm expectation that the balance of financial advantage will continue to move away from the car – at least in London.

Key outcomes were:

- Between 35,000 and 40,000 car trips a day switched to public transport,[56] creating an average 6 minutes' additional physical activity per trip compared to private motor transport.[57]
- Between 5,000 and 10,000 car trips switched to walking, cycling, motorcycle, taxi or car share. (Unfortunately, these modes of transport were all grouped together, but the data seem to corroborate other positive results.)
- Cycling mileage within the zone rose by 28% in 2003, and by a further 4% in 2004.[56]
- Survey respondents reported improvement in comfort and overall quality of walking and public transport systems.[56]
- Users of all modes of transport – including car users – reported improved satisfaction.[56]
- A large portion of the scheme revenues were reinvested in improvements to public transport, walking, cycling, and safe routes to schools.[56]

Case study

City of Copenhagen

Copenhagen – a city known for cycling – is also one of the world's great pedestrian cities, with a narrow medieval street grid favourable for walking. In the 40 years since Copenhagen's main street was turned into a pedestrian thoroughfare, city planners have taken numerous small steps to transform the city from a car-oriented place to a people-friendly one.

"In Copenhagen, we have pioneered a method of systematically studying and recording people in the city. After twenty years of research, we've been able to prove that these steps have created four times more public life."
Jan Gehl, architect[58]

Measures taken in Copenhagen include the following.

- In 1962 Copenhagen's old main street, Strøget, became its first car-free street. Over successive decades, more car-free streets were progressively introduced, linked to 'pedestrian-priority' streets where motor vehicles are permitted but must give way to pedestrians and cyclists.
- The city reduced the number of cars in the city centre by eliminating parking spaces at a rate of between 2% and 3% a year. Between 1986 and 1996 about 600 spaces were removed.
- The creation of pedestrian streets made certain car parks unusable, enabling the city to transform them into public squares.
- More people came to live in the city centre, giving visiting pedestrians a feeling of safety.
- Great attention was paid to the details of a pedestrian environment: outdoor cafés, public squares, and street performers in the summer; and skating rinks, heated benches and gas heaters on street corners in winter.
- The city promoted cycling as a major mode of transport, with new and expanded bike lanes and new bike crossings (created by removing parking spaces near junctions).

The results have been remarkable, and it is worth pointing out that, early in this programme, doubters suggested that 'city activity does not belong to the northern European tradition'. The total area of car-free space in Copenhagen trebled between 1968 and 1986. Over this period, the number of people observed standing and sitting in city public spaces also trebled. Thirty-four per cent of residents who work in the city commute by cycle. [58, 59]

Action

Priority actions are in **bold**.

Cross-Government

4.1 Government Departments – the Treasury, Department for Transport, the Home Office (and the Police Forces), Department of Health, Department for Communities and Local Government and Department for Education and Skills – should establish strategic plans on the promotion of walking and cycling, commit significant resources to these, and research and monitor the outcomes. Best practice in this area could be developed, initially, at town level, through the concept of adequately-resourced 'healthy travel towns'.

4.2 Each of these departments should identify within its sector all subsidies to private motor traffic, such as workplace car-parking below market rate, car allowances above marginal mileage cost, and private use of company vehicles. It should ensure the removal of those subsidies, or should offer equivalent or higher value inducements to users of public transport, and to those walking and cycling.

4.3 The Government should require that all projects which benefit from Exchequer or Lottery funding for capital investment should be required, by contract, to guarantee walking and cycling access, to defined minimum standards. Projects should not be funded unless they can demonstrate that additional motor traffic will not be created during their operation.

The Treasury

4.4 The Treasury should make due allowance for the promotion of walking and cycling in the Comprehensive Spending Review, and make the budget allocation for each relevant Government Department conditional on the department's recognising it as a priority.

4.5 The Treasury should: raise fuel taxes; reinstate the fuel price escalator (to send a clear message that the cost of motoring will progressively rise); remove VAT on bikes and cycling equipment; and reduce the amount of tax payable, for example, on cycling allowances. Raising taxes on fuel may be considered unpopular, but would send clear signals about prioritising walking and cycling.

Department for Transport

4.6 The Department for Transport (DfT) (in conjunction with other departments, notably the Department of Health) should set demanding targets for the share of trips made by walking and cycling, over a range of terms up to 25 years. They should allocate transport budgets to walking and cycling proportionate to their target share, and performance-manage local authorities against these targets.

4.7 The DfT should publish clear guidance on traffic reduction, speed management, and road space reallocation from motorised transport to walking and cycling.

4.8 The DfT should include consideration of the potential health impacts as an integral component of any impact assessment carried out on policies, programmes and major schemes.

Department of Health and the NHS

4.9 The Department of Health and the NHS should remove all financial inducements to employees to use private motor transport (such as provision of car parking at below market rate), and replace them with incentives to walk and cycle.

4.10 The Department of Health and the NHS should also review operating policies, such as transport and travel guidance to staff, car and cycle allowances, working practices and dress codes.

The Home Office and the Police Forces

4.11 The Home Office and Police Forces should improve enforcement of traffic law. They should move towards adopting 'Vision Zero' road safety principles, as implemented in Sweden. Vision Zero starts from the assumption that eventually no-one will be killed or seriously injured within the road transport system.

Department for Communities and Local Government

4.12 The Department for Communities and Local Government should establish a nationwide programme of Community Street Audits, as piloted by Living Streets, and provide guidance on their use.

4.13 The Department for Communities and Local Government should develop and implement planning guidance prioritising walking and cycling. This could include, for example: minimum cycle-parking and maximum car-parking standards for new developments; standards of connectivity to ensure successful mixed-use development; high densities; and use of 20mph as a default speed limit.

Department for Education and Skills

4.14 The Department for Education and Skills (DfES) should explicitly recognise the importance of walking and cycling – on the way to and from school, within the school day, and in curriculum activity. They should establish national and school-level policies and programmes to promote walking and cycling and to discourage use of sedentary, motorised modes of transport.

4.15 The DfES should ensure that these policies and programmes are linked into all aspects of educational policy and into school, college and university management, with clear links between policies and measures addressing health, sustainability and climate change, citizenship and estates management.

5 Urban green space

Alan Barber
CABE Commissioner, and freelance consultant specialising in urban parks and green spaces

Urban green space: the background

The provision of green spaces within the urban environment has always been strongly linked to promoting good health. Successive Public Health Acts enabled local authorities to provide public parks. The underlying humanitarianism behind the growth of public parks in the second half of the 19th century is an inescapable force in the development of Britain as the world's first urban society. Parks were also recognised early on as making good commercial sense in helping to protect the health of workers.

The parks movement grew in the big industrial cities. Manchester opened three public parks on one day in 1846, all paid for by public subscription. Rivalry between cities was a major factor in the rapid creation of public parks in the latter half of the 19th century. They also became symbols of civic pride. John Ruskin offered inspiration claiming: *"The measure of any great civilisation is its cities and a measure of a city's greatness is to be found in the quality of its public spaces, its parks and squares."*

Today, public parks account for one-third of all the public green space contained within the urban areas of England. Other types of urban green space include playing fields, nature reserves, allotments and cemeteries. The Urban Green Spaces Taskforce, set up by Government following the Urban White Paper,[60] suggests there is a total of between 120,000 and 150,000 hectares of urban green space in Britain, accounting for around 14% of the developed area[61] – almost equivalent to the entire surface area of Greater London, which covers 165,000 hectares.

What's the problem?

The Government acknowledges that there has been a steep decline in the quality of public parks during the last quarter century. The Public Park Assessment looked at 2,000 of the UK's parks in 2000-2001 and found only 18% described as being in 'good' condition by their local authority. Of the remaining 'fair' (69%) and 'poor' (13%) parks,

more than 70% were described as either 'stable' or 'declining' in quality.[62]

A disturbing finding of the Public Park Assessment is the prevalence of 'poor' parks in poorer urban areas – a case of the public realm now serving to reinforce inequalities in society. Such areas of deprivation are likely to have a higher incidence of poor health, and less access to alternative recreation. Boston became the first city in the US to make the improvement of its green spaces a key feature of its Poverty Action Programme, the justification being the greater dependence of poor people on good-quality parks and green spaces in their local neighbourhood.[63]

The Public Park Assessment also catalogued the loss of features in public parks. In the 20 years before the survey, 56% of paddling pools, 30% of toilets, 29% of shelters and 28% of tennis courts were lost to use. There was also a conspicuous decline in maintenance standards, with an increase in litter and graffiti, and the withdrawal of many park-based staff in favour of peripatetic maintenance units.

The decline of public parks and other green spaces within urban areas is likely to have a negative effect on people's use and enjoyment of them. In research carried out by the University of Sheffield,[64] focus groups of both users and non-users were asked what would be in their ideal urban green space. Unsurprisingly, the most frequently mentioned component was vegetation, followed by water, play opportunities, comforts like seating, toilets and shelters, good access (which was particularly an issue for people with disabilities), sport, events, and the presence of identifiable and approachable staff. Refreshments of a good quality and at reasonable prices, environmental quality issues such as litter bins, lighting and protection against vandalism, and specific features such as sculptures and mazes were also mentioned. Animals were considered to be important for children, and opportunities for wheeled activities (including pushchairs and wheelchairs) were desired by women and young people. The improvements people want to see in urban green spaces are therefore related to good design and management focused on meeting people's needs, overcoming barriers to use, and providing a high-quality and varied experience for the range of different groups in the community as a whole.[65]

Why did this decline happen?

A House of Commons Inquiry[66] and the subsequent Urban Green Spaces Taskforce report[61] agree that part of the problem is the lack of information about the public's use of parks. The setting up of CABE Space as an integral part of the Commission for Architecture and the Built Environment (CABE), an outcome of the Government's consideration of both reports is, in part, designed to rectify this information deficit.

The arguments run thus:

- Counting the number of people using parks and green spaces is difficult, expensive and rarely done, so any decline in use goes unquantified, making cuts in expenditure easier to justify, but difficult to reinstate. Equally, increases in use, which could support action, will be missed.
- The benefits of parks and green spaces, including benefits to health, are difficult to measure, so it is difficult to prove the argument that higher-quality parks give better value for money.

- Parks and green spaces are fundamentally public realm. Those who pay for their upkeep (local authorities) do not see a direct return on their investment.
- Parks and green spaces are multifunctional, and their environmental, economic, health, community, heritage and other benefits are seldom fully recognised together. Attracting the skills and resources to optimise the use of urban green spaces for a variety of purposes is not seen as a policy imperative.

These arguments all point to the need to be far more robust in measuring and demonstrating the real value of parks, from the broadest possible range of perspectives.

What can be done?

In its advocacy role, CABE Space has commissioned research into all the issues mentioned above.[67] Results so far have begun to support the notion that higher-quality green space gives better value for money. But it is still difficult to argue for more revenue funding, given the competing demands of local authorities' burgeoning statutory duties. That the institution of local government, so instrumental in providing Britain's heritage of public parks and green spaces, has subsequently presided over their decline, reflects a significant shift in government priorities, as well as an increasingly restrictive finance and policy operating framework for local authorities.

However, the following drivers for change are increasingly drawing political attention.

- The need to promote better physical and mental health by supporting people to lead healthy lifestyles in order to try and reduce the expense of medical treatments, as argued in the Wanless report[68] and the RSPB's report Natural Fit.[69]
- The need to provide opportunities for communities to gather, socialise, volunteer and learn to respect each other, thus helping to reduce the cost of coping with crime and disorder.[70]
- The need to conserve and enhance wildlife habitats and biodiversity in urban environments, both in their own rights and to compensate for their depletion in the countryside.
- The need for urban areas to attract and retain inward investment and employment by providing an attractive living environment.
- A shift in urban policy towards higher density housing, which creates the need for access to high-quality parks and green spaces to make living in such housing more attractive to residents.
- The need to encourage children and young people to learn about, and be active in, the natural environment.
- Maximising the ability of the green infrastructure to modify the predicted effects of climate change on urban environments.[71]

In addressing these issues, parks and green spaces have the following distinct advantages.

- Their distribution is widespread, and the provision of green spaces is a town planning goal. This includes both the protection of existing spaces and the provision of new spaces as part of new development.[72]

- There are very good opportunities for volunteer and community engagement. Several new funding schemes encourage community involvement in improving green spaces and creating new ones. It has been estimated that park support groups in the UK may have as many as half a million members.[73]
- The health benefits of physical exercise in public parks and green spaces are augmented by the 'biophilia effect' – where contact with nature has been found to have a beneficial effect on health. This has found increasing support among researchers, particularly as physiological effects can be measured and green environments can be compared with non-green. Contact with nature has been found to be effective in alleviating the symptoms of anxiety, depression, and psychosomatic illness, including irritability, restlessness, insomnia, tension, headaches and indigestion.[74]
- Urban parks can provide respite from pollution and noise, contributing to improvements in respiratory health and reductions in stress.

Action taken since the publication of the report of the Urban Green Spaces Taskforce[61] is promising. The creation of CABE Space as a champion of urban green space in England is helping local authorities to develop more strategic approaches, undertaking research into the benefits of green spaces and running campaigns. The current campaign – ParkForce – encourages local authorities to put staff back into public parks.

Such staff can be involved in encouraging health initiatives, including the spread of 'Green Gyms' – a provision championed by the British Trust for Conservation Volunteers (BTCV). BTCV Green Gyms enable people to improve their health and fitness by taking part in practical conservation activities. Many Green Gyms are sited in areas of deprivation where there are open or green spaces that need to be improved, including parks, school grounds, woodland, allotments and derelict land.

There is now a greater optimism about the future of public parks and green spaces, but still major problems to be overcome, not least the lack of adequate revenue funding for the high standards of maintenance needed to attract the most vulnerable and health-poor into regular park use. A comparison of Audit Commission figures in their 1988 study[75] and those of the National Audit Office in their 2005 study,[76] shows a 35% reduction in revenue budgets for the maintenance of urban parks and open spaces in England during the 17 years from 1988 to 2005. This is wholly incompatible with professed Government and local government policy, and will increasingly undermine current initiatives and the welcome investment from the National Lottery in urban park restoration.

The more attractive parks and urban green spaces become, the more people are likely to use them for physical activity, as well as to benefit their mental well-being. Given the current poor condition of most green spaces, this cannot be achieved without additional resources. Revenue funding for maintenance of parks and urban green spaces remains well below that of 20 years ago. Substantial additional resources are needed to achieve major improvements, and to get closer to optimising the value of the country's heritage of parks and green spaces.[77] Investing in parks and green spaces should be seen as an investment in public health.

What has been done?

Case study

Walking for Health, Bradford

The Walking for Health initiative in Bradford encourages Asian women (a population group with low levels of physical activity) to visit parks for physical activity. Bradford Metropolitan District Council, in partnership with the primary care trust, is developing a series of guided walk leaflets.[78] As well as details of the walks, the leaflets include health advice and public transport details and some provide historical information about the park.

"We work closely with the Parks and Landscape Department and are delighted with the knock-on effect which Walking for Health in Lister Park has produced in other Bradford parks. Lister Park is very well looked after. It is so much easier to promote 'walking for health' in good parks. Bradford City Primary Care Trust has acknowledged the benefit of using local parks and has actively been involved in developing partnership work to encourage it further. Other local primary care trusts are using Lister Park as an example of good practice."
Hawarun Hussain, Physical Activity Co-ordinator, Bradford Primary Care Trust

Case study

Power-pramming, Dulwich Park, London

Power-pramming is the brainchild of Liz Stuart, a qualified post-natal exercise instructor, who set up 'power-pramming' after the birth of her son because she was keen to get back to her pre-pregnancy shape and wanted a way of keeping him with her and meeting other new mothers while she worked out. It is established in four London parks and involves regular sessions for mothers and their babies.

The programme starts with a power-walk or jog across the park with the babies tucked up in their pushchairs and enjoying a high-speed ride. The mothers then complete a series of circuit-training-based exercises. They use their babies as weights for shoulder lifts and bicep curls, and lie them on their backs on the grass and kiss them each time they dip on a press-up.

"The successful classes are in places where there is a good community feeling and lots of things for mums to do with new babies. It helps if there is a café nearby where prams can be easily accommodated and breastfeeding is not considered a negative thing. This is very important for the post-workout refreshments!"
Liz Stuart

Action

Priority actions are in **bold**.

Department of Health

5.1 The Department of Health should revise its spending priorities to provide significant funding for the better management and maintenance of the urban green infrastructure, as a direct investment in public health. This additional funding should be allocated to local community trusts, based on existing cross-authority parks forums, which would release the additional revenue funds to match current local authority budgets pound for pound. An agreed programme of work should include investment in raising skills in the management and maintenance of parks and green spaces and in the design of health promotion initiatives in those spaces.

Department for Culture, Media and Sport

5.2 The Department for Culture, Media and Sport (DCMS) should recognise public parks as an important part of cultural, leisure and tourist provision, particularly in their role in promoting health and well-being, and should offer direct support to the Institute for Sport, Parks and Leisure.

5.3 The DCMS should re-prioritise distribution of National Lottery funds to 'good causes' in order to guarantee continuation of the Parks for People programme of the Heritage Lottery Fund and the Big Lottery Fund, and extend it to non-heritage green spaces, particularly those in areas of greatest social deprivation.

Local authorities

5.4 Local authorities should re-structure their departments to bring together into one unit all those responsible for the planning, design, management and maintenance of parks and urban green spaces. This should be seen as a green or natural 'public realm'.

5.5 Local authorities should develop partnerships with local, regional and national organisations to enable joint funding and ownership of programmes to improve parks and green spaces and to maximise their health benefits.

5.6 Local authorities should appoint an executive cabinet member with a specific responsibility for green infrastructure, making close links with the portfolio for public health, including links to healthy food production through gardens and allotments.

Department for Communities and Local Government

5.7 The Department for Communities and Local Government should take the lead in the Living Places consortium of Government Departments to press for new service level agreements under the Comprehensive Spending Review which reflect the importance of good parks to the Government's Liveability, Choosing Health, Urban Regeneration and Respect agendas, and should set clear targets for improvements in the care of the green environment.

5.8 The Department for Communities and Local Government should require the Academy for Sustainable Communities and the Commission for Architecture and the Built Environment (CABE) to raise skill levels in the care of parks and green spaces, particularly in the design of health promotion initiatives in those spaces.

Department for Environment, Food and Rural Affairs

5.9 The Department for Environment, Food and Rural Affairs should ensure that Natural England has a strong remit to promote healthy recreation in the natural environment of towns and cities, through local area agreements.

6 Outdoor playing space

Don Earley
Deputy Chief Executive, National Playing Fields Association

Note: The National Playing Fields Association has now changed its operating name to Fields in Trust (FIT).

Outdoor playing space: what's the problem?

The built environment has a significant impact on health through a number of inter-related issues including the provision of outdoor facilities and opportunities for play, active recreation and sport for both children and adults. Outdoor facilities include, for example, playing fields, recreation grounds and play areas. The built environment also has an impact on the outdoor environment, in that it affects the freedom and ability of children to play outdoors.

The final report of the Urban Green Spaces Taskforce, published in 2002,[61] refers to the health benefits from good-quality parks and green spaces in terms of reducing obesity, decreasing the risk of coronary heart disease and strokes, and reducing daily stress. Similarly, in relation to the use of the wider recreational environment, *Wild Adventure Space*, a recent review by OPENspace,[79] summarises the potential health benefits of outdoor play and adventure in natural settings as: increased levels of physical activity and fitness; positive views towards taking physical activity; activation of higher cognitive processes and healthy brain development; and promotion of and improved healthy well-being through childhood and young adulthood. Research by Mackett and colleagues[80] has identified children's lifestyles and reductions in the amount of walking as one of the reasons contributing to the increase in overweight among children. They showed that walking and playing provide children with more physical activity than any other activities, that encouraging children to be out of the home will increase their physical activity, and that the shift from unstructured to structured out-of-school activities encourages car use.

However, as will be discussed later, there are major problems related to the provision of outdoor playing space. These include: the continuing loss of outdoor recreational facilities; outdoor facilities frequently being replaced by indoor provision, which is more expensive to provide and maintain; facilities for children being provided at a cost and under lock and key as opposed to open-access provision; and the location of equipped

play facilities in central locations at the expense of very local provision, sometimes accompanied by the removal of facilities. These factors all work to reduce healthy outdoor activity, particularly for the young.

Why does this happen?

One of the key planning objectives stated in the Government's Planning Policy Guidance Note 17 [72] is the recognition of the vital role that open space, sport and recreational facilities have in promoting healthy living and preventing illness, and in the social development of children of all ages through play, sporting activities and interaction with others. However, a number of significant barriers can work together to prevent this general guidance being put into practice. These include: high capital costs; the cost of maintaining a range of local facilities as opposed to centralised facilities; poor design, with an excessive concern about health and safety which reduces opportunities for risk and challenge; increased insurance charges together with greater tendency of the public towards litigation; inconsistent interpretation of technical standards relating to provision of equipment and surfacing; and lack of available technical support for voluntary sector projects and those managed by parish or town councils.

There has been a significant increase in concern in recent years about social dangers to children, typically referred to as 'stranger danger'. But of equal, or indeed greater, concern in the context of children's use of the outdoors are the roads and highways of the country and the dominance of motorised traffic over pedestrians. There is a strong case to be made for a more child- and pedestrian-friendly environment, balancing the freedoms of the motorist with children's freedoms, and the provision of more outdoor places where children can play within their local area. It is also important to take account of the disadvantaged, who are disproportionately affected by road danger: children in deprived areas are up to three times more likely to be killed on the roads compared with other children.[25]

What needs to be done?

Safeguarding and improving outdoor facilities for sport and physical activity

It would be wrong to assert that outdoor facilities for physical activity and play are better than indoor facilities, or that grass facilities are worse than artificial turf pitches. However, there are strong arguments for maintaining and improving outdoor facilities for physical activity. Many people have a natural inclination to be outside and to play outside, even in the face of the worst of British weather. This is particularly true of children and young people. If we are to make the best use of recreational facilities and active recreation, the following are needed as a very important part of the solution:

- greater freedom for children to play outside
- more and better outdoor places and facilities where children can play, and
- better protection of those places and facilities that do exist.

It is important to avoid losing or disposing of local outdoor facilities to fund capital developments such as centralised indoor facilities.

Siting of outdoor facilities

The National Playing Fields Association (NPFA)[81] recognised the need for local places to play in, and the importance of walking, as long ago as 1992 when it recommended the introduction of a hierarchical approach to planning for play based on: local areas for play; local equipped areas for play; and neighbourhood equipped areas for play. This approach has been used by some two-thirds of local authorities in England. The recommendations are for provision related to age, distance and diversity of opportunity. The NPFA also referred to the need for local facilities on the basis of accessibility. It argues that a 20-minute travelling time to specialist facilities such as an artificial turf pitch or athletics track is acceptable, and that a 10-15 minute journey to local sports facilities is reasonable (although it does not specify the mode of travel for the journey). In that context the NPFA recommends that playing fields (or sports and recreation grounds or other local outdoor facilities) should be within three-quarters of a mile (1.2km) of where people live. More recently, Sport England and the Department for Culture, Media and Sport have announced new indicators for the Comprehensive Performance Assessment of 20 minutes' travel by foot in urban areas and 20 minutes by motorised transport in rural areas.[82]

In a report commissioned by the National Playing Fields Association, Wheway and John[83] found that disabled children need local facilities much more than large-scale, 'destination' facilities. These need to be adapted where possible to take account of specific disabilities so that children and their carers feel both welcomed and comfortable. The key issues were the three As – accessibility, attitudes and adaptation. On a broader footing, the NPFA asserts the need for local facilities for sport and play to be accessible to all groups, including those who may have difficulty in travelling distances, such as the young, the elderly, the disabled and low-income earners. Such approaches are increasingly recognised in master planning, which emphasises the importance of improving accessibility, enhancing amenity and increasing awareness[84] as part of creating new settlements and environments. The NPFA report emphasises the importance of the proximity of facilities, stating they should be: close to home, close to workplaces, close to schools, and close to shops.

Better protection for and reinvestment in outdoor facilities

There has been much publicity in recent years about threats to and losses of outdoor sport and play facilities. In England, public concern has led to revised and strengthened Planning Policy Guidance and educational legislation (see section 77 of the School Standards and Framework Act, 1998). Unfortunately, the picture is not so clear-cut. Unreliable information has been used in unreliable ways, principally because, until recent investment by the Government and the Big Lottery Fund in the Active Spaces initiative hosted by Sport England,[85] there had been no inventory of facilities and therefore no ability to measure change. The problem was identified long ago by the NPFA and others and for two years in 1993-1995 a Register of Recreational Land was established and maintained before funding for the register was withdrawn by the then Sports Council. In terms of the assessment of this problem, a number of matters are quite clear.

- Sales of playing fields and other facilities continue. The number of planning applications for change of use increased from 625 to 1,413 in the five-year period

ending March 2004 [86] (an average increase of 157 a year), before reducing to 1,271 in 2004/2005 (a reduction of 142 from the previous year).

- Government and Sport England policy encourages the sale of outdoor sports facilities as long as they are replaced by indoor facilities or primarily indoor facilities: for every £1 invested in outdoor facilities following a sale, £1.42 is invested in indoor facilities. The average cost of investment in these new indoor facilities is some £1.46 million compared with £332,000 for outdoor facilities, which means that over four times more is spent on a new indoor facility than on a new outdoor facility.
- The quality of outdoor facilities is often poor, in particular the pitch conditions and quality of the changing facilities, which are frequently unsuitable for children and women.
- All this is happening at a time when the sports bodies are trying to improve facilities for and increase participation in their sports. For example, the Football Association estimates that some £2 billion is needed to bring current facilities up to a reasonable state.[87]
- Compared with playing fields held by local authorities for public use, school playing fields in England are better protected and the use of proceeds for reinvestment in outdoor facilities better safeguarded.

What has been done?

Case study

King George's Field, Stepney, London

Established as a memorial playing field following the death of King George V in 1936, the protected land of King George's Field covered some 65 acres. Dedicated in 1965, its use for play and active recreation should have been protected ever since. However, with successive changes in local government, the Deed was breached on a number of occasions. The London Residuary Body sold a small plot to a developer, although the proceeds were later recovered by the National Playing Fields Association (NPFA). The site was also used to house a new school. Many houses still in beneficial use since the 1960s were originally intended for clearance. Discussion between the borough and the NPFA took place over eight years and the matter was finally settled following the conditional award of multi-million pound funding from the Millennium Commission. Key features of the settlement were:

- release of land still used for housing
- release of land used for the school
- an additional 80% of open space brought under protection
- slight variation of the trust purposes to allow for 'environmental purposes'.

Work funded by the Millennium Commission is complete and there has been investment in new sports facilities.

This case study shows the value of long-term protection, and the need for guardians of facilities to be vigilant, tenacious and unwavering while taking a long-term view.

Case study

Facilities for young people in villages

It is often claimed that every village should have a village hall – or at least that every village should provide for the play and recreation of its youngsters. The NPFA has worked very closely with one of its waste recycling partners (WREN), local people and others, to invest in new facilities at Woodhouse Eaves in Leicestershire (£73,000), Thurlaston in Leicestershire (£26,000), and Amber Hill in Lincolnshire (£17,000). Investment has been for informal sports facilities, play areas, general landscaping or skateboarding provision. This creation of active leisure opportunities for children in rural areas has been seen to be as important as for those in our towns and cities. As in all cases where the NPFA is involved, the land and facilities are managed locally and protected in the longer term.

Case study

Filwood Playing Field, Bristol

Following major refurbishment, first-class sports facilities have been provided at the 20-acre playing field in Creswicke Road, Filwood. Formerly owned by Avon County Council, the NPFA negotiated the transfer of this land to the NPFA, to be protected by charity law, with an endowment of £700,000 (later augmented by Football Foundation funding) for capital improvements and revenue purposes mainly based on a football development programme. The land is managed by the local Filwood Playing Field Trust, which has been granted a 99-year lease by the NPFA. Facilities provided include five adult and junior football pitches, four mini-soccer pitches, a training grid and new changing rooms, including referees' accommodation, for both males and females.

It is important to avoid losing or disposing of local outdoor facilities to fund capital developments such as centralised indoor facilities.

Action

Priority actions are in **bold**.

Government

6.1 The Government (through the Department for Communities and Local Government) should ensure that legislation to protect playing fields held for public recreational purposes considers all potential recreational needs in terms of access, quantity and quality. It should also ensure that, in the case of disposal of playing fields, the proceeds are secured for reinvestment in outdoor facilities.

6.2 The Department for Education and Skills should extend the School Standards and Framework Act 1998, which provides legislation to protect school playing fields, to cover independent schools, sixth form colleges and academies. Currently, the Act's requirement that local authorities, school governing bodies and foundation bodies must apply for consent to dispose of school playing fields, applies only to maintained schools.

6.3 The definition of 'playing fields' should be standardised. The Government and Sport England define a playing field as an area of at least 0.4 hectares,[88] whereas in the education system it is defined as at least 0.2 hectares. The 0.2 hectares definition should be adopted, in order to protect local land for sport and play for children and the less mobile.

6.4 The Government should require that all projects which benefit from Exchequer or Lottery funding for capital investment in outdoor sport, play or recreational facilities should be required, by contract, to guarantee and protect the defined use, public accessibility, the land and facilities, and the re-use of any proceeds from income from the facilities. As far as possible, the aim should be for replacement outdoor facilities of at least the same size, of better quality and still serving the same catchment areas. The National Playing Fields Association should be invited to advise on this.

Department for Communities and Local Government

6.5 The Government should review its planning policy on open space, sport and recreation, with a greater emphasis on public health. In England, the Department for Communities and Local Government should publish a new Planning Policy Statement, PPS17, which should reverse the current policy of allowing outdoor facilities to be lost as long as there is 'a benefit to sport'. In other words, indoor facilities should not be regarded as an adequate substitute for outdoor facilities. Sport England, as a statutory consultee on developments on playing fields, should take this into account.

6.6 The Department for Communities and Local Government should establish scrutiny arrangements for planning applications relating to all types of outdoor public space including open space, green space and playing fields. CABE Space should be invited to help with this as a statutory consultee. Currently, Sport England is a statutory consultee only in the case of planning applications for playing fields. It should also be consulted on applications related to other open space or green spaces that fall outside the

definition of playing field.

6.7 The Department for Communities and Local Government should enforce the requirement on local authorities to undertake local assessments of need and determine local standards for open space, covering accessibility, quality and the range of activities offered.

Department for Culture, Media and Sport

6.8 The Government, through the Department for Culture, Media and Sport (DCMS), should establish a national strategy for play in England – based on the needs of children to develop through play and recreation in non-educational settings – leading to relevant policies and funding streams. The Big Lottery Fund has led the way by providing £155 million, including some £15 million for Play England over the five years from 2006 to 2011. The Government will need to consider taking up funding and responsibility thereafter.

6.9 In the light of the importance of sport, play and recreation to health, education, quality of life, the environment, the economy and citizenship, the Government should look afresh at the merits of establishing services for 'leisure' on a statutory basis. The DCMS should invite the professional body for those working in the sector – the Institute for Sport, Parks and Leisure – into early discussions about this.

Local authorities

6.10 Local authorities should link policy on open space to transport policy. Open space should be accessible for pedestrians, cyclists and public transport, and have adequate cycle parking, and promote active travel.

6.11 Local authorities should continue to seek developer contributions under Section 106 agreements of the Town and Country Planning Act 1990 for outdoor sport, play and open space facilities, whether on- or off-site. Greater networking is needed to ensure dissemination of good practice and maximum community benefit. If the Planning Gain Supplement proposals published by the Treasury in 2006 proceed, open space should be excluded from any calculations.

Sport England

6.12 Sport England should work with the relevant governing bodies of sport and the National Playing Fields Association, to develop a quality standard for access to sporting facilities by active, non-motorised travel modes, and should deliver this to Government by a defined date. A relevant indicator is currently being developed under the Comprehensive Performance Assessment initiative within the leisure block. This deals with access to at least three of six sporting facilities, within 20 minutes' travel time, at least one of which can be quality-assessed to an agreed standard. Playing fields and sports pitches are one type of facility but no suitable quality standard exists for these.

7 Building design

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Building design: what's the problem?

Architectural design has always relied on a collection of technical disciplines, but a modern and sophisticated construction industry now depends on a large degree of professional and technical support that can lead to a fragmentary approach to building design. This reflects the problems faced by urban planning, where years of use-based zoning have led to a disjointed townscape (see chapter 2 *Urban planning*). This has led to the emergence of specific architectural forms that often are labelled 'soulless' or 'inhumane' for their excessive scale, deep plans (multiple-floored buildings with low ceilings and large floor areas), and lack of natural light or materials. The extreme examples are business park offices, retail sheds, or 'super-hospitals', but this approach is also tending to filter through to all scales of development with negative impacts on health, mainly due to their focus on the car as the dominant mode of transport.[89]

Despite government guidance on the subject, it is still uncommon for new building at any significant scale to reflect the national agenda promoting pedestrian-friendly, human-orientated development, which can help to strengthen and foster community. National level guidance contains much rhetoric about mixed-use, medium-density centres, but this is still poorly articulated in local plans, which often continue to promote the single-use premises for which developers find it easy to raise finance and which will – supposedly – encourage investment. Such single-use buildings tend to be built for short life and, while many of their basic features may not pose a direct threat to health, they do compromise well-being through a planning model that relies on car travel as the dominant mode. As well as leading to a decline in physical activity, and increasing the social inequalities that manifest themselves in differential levels of car ownership, there are also associated problems such as air pollution, environmental erosion, and increased carbon emissions.

Construction and delivery systems are geared up to providing both commercial and residential accommodation of standardised design, following a pattern across the country. Obvious examples are the retail or business 'boxes' – steel-framed sheds with

glazed, steel or brick skins – which are still being built in large numbers on edge-of-town or 'brownfield' locations, along with the ubiquitous brick-faced detached estate houses built by our major homebuilders. In this planning model, the only physical activity enjoyed by building users is likely to be the walk from the car to the entrance. Within the buildings, lifts are prominently placed in the layout of entrance areas. This is a reflection of Disability Discrimination Act (DDA) guidelines on legibility, which enable disabled people to easily locate a lift when entering a building. However, the space planning of circulation areas often focuses on lift specification – including decoration and orientation – at the expense of stairs which are relegated to the status of escape routes. This happens not only in high-rise developments, but also in two- and three-storey buildings.

Large floor areas within commercial buildings may help social human interaction on the same floor, but do not necessarily promote interaction between floors in buildings where an organisation occupies multiple floors of the building. Moreover, 'deep plan' buildings (with low ceilings and large floor areas) convey particular problems of servicing as they require a high degree of artificial light and air conditioning.

Aside from specific issues of health raised by conventional modern design, there is also the question of general well-being fostered by what are essentially standardised methods of construction and assembly in both the commercial and residential sectors. Does the resultant homogeneity of appearance contribute to a general sense of disaffection among users? It is only in recent times that the value of place, and the support in planning guidance for use of materials reflecting local character and idiosyncratic design styles, have been widely promoted. Certainly, whenever it is proposed to demolish older buildings reflecting the area's history or character, the response from the general public in the form of community forums, and from heritage and conservation groups, suggests that a high degree of local identity is desirable in buildings. It also appears that there is little or no confidence among lay people that the architectural establishment – which may be perceived as preoccupied with the 'avant garde' – can provide buildings that endorse character, and build harmony and legibility into the urban realm.

Why does this happen?

Planning restrictions imposed by local authorities working to a local plan have seen the proliferation of single-use neighbourhoods throughout the second half of the 20th century. Highway engineers also contributed to this trend, as clear zoning meant that they could predict the use of routes and intersections, and provide a standardised road system in response. In practice this has simply resulted in more traffic passing over congested nodes (see chapter 2 on *Urban planning*) and an environment that alienates or directly threatens pedestrians, cyclists, the young and the very old.

Single-use buildings favour short-term development and ease planning decisions, but they do not foster communities. Categorised zoning (for example B1 office, B2 industrial) results in homogeneity of provision that suits financial and letting structures but is wasteful of both land and material resources. Anticipated life spans of most buildings have dropped from 100 years or more in the late Victorian period, to 30 years or less in 2006. Large-scale financial institutions do not want to consider the long-term investment potential – through appropriate management – of new buildings. Instead there is a

predisposition to quick-build, quick-sell solutions for developers of a product that barely considers the current user and is not programmed for future flexibility. The form of the modern business park or housing estate is linked to the disconnectedness of the developer from the investor. Where developers and investors work together there is (generally) a stronger urban realm and better quality building design, with concomitant effects on health and well-being. Examples of this approach include Brindley Place in Birmingham – owned by Argent Group, a subsidiary of the British Telecom Pension Scheme (see page 21), and Poundbury in West Dorset, an extension to the town of Dorchester developed by the Duchy of Cornwall (see page 60).

Building regulations are guided by measurable factors, and – while these guarantee basic specifications addressing heat, cold, and damp, all supporting the comfort of the user – they perhaps do not consider a holistic picture of the building's life or the health of occupants beyond these easily identifiable risks.

Revision of Part M of the Building Regulations covers access to and use of buildings, in line with Disability Discrimination Act legislation. This has focused attention – and design budgets – on access and lifts in particular. This is often to the detriment of stairwells, which receive rudimentary specification. This is not helped by the fact that, as the stairwell is the statutory means of escape under fire regulations, stairwell design is determined by fireproofed materials, while the location of each core is necessarily remote from the main entrance in order to provide alternative means of escape. Add this obscure siting to the standard shuttered concrete treatment for stairwells and it is small wonder that the lift becomes the standard form of access for all users. In buildings of four storeys or fewer there is a far stronger incentive to promote the stairs as the main form of access, as it is reasonable to suppose this might become habitual behaviour for occupants.

An attractive central staircase can encourage people to be more active.

However, the most obvious risks to public health remain those connected to a predisposition to plan buildings and towns around car use, based on historical precedent, lack of political will (both national and local), and on developers' perceptions of market demand – by residential buyers, shoppers and commuters – for car access.

Research in this area has gained pace in recent years, especially in the US. Mention should be made of the work of Dr Richard Jackson,[90, 91] a paediatrician and the instigator of this subject as a major field of study. While he has been careful to highlight the nutritional factors in the obesity epidemic, he also states:
"But (it) is also because we and our children increasingly cannot walk to where we need to do our life work: schools, sports fields, friends' homes, libraries, shops or churches. The difference between highly walkable and non-walkable communities is an average of about 7 pounds of body weight." [92]

What can be done?

The 'shared space' of our urban realm has a huge impact on health. Ulrich is interested in the phenomenon of 'biophilia', our human response to natural environments,[93] and is

perhaps the best known researcher on the effects of building design on health. His work is primarily concerned with the design of hospitals. A behavioural scientist, he conducts research on the effects of healthcare facilities and the natural environment on medical outcomes. He and his associates have researched, for example, the effects of hospital window views on recovery from surgery, and the influences of healthcare gardens and art on patients and hospital staff. His work has influenced the architecture, interior design, and site planning of scores of major hospitals in different countries. Ulrich's research suggests better directions for landscape architecture and urban nature, urban planning and urban forestry.

It is generally understood that the traditional street form – in which active frontages provide variety and human activity provides animation – are better places to walk and cycle, especially where green spaces are successfully incorporated into city planning. Some would extend this to say that there is a beauty in the harmony of such townscapes – the 'picture postcard' appeal of the holiday destination – that conveys a direct benefit to citizens, housing them healthily and happily.

Just as the tide is turning on industrial food production, focus is turning to re-thinking car use and energy consumption. This may help to support efforts to educate a wider public on the value and use of 'good urbanism'. This is an education that must extend to those opinion-formers and decision-makers in local government who are still wedded to the short term, planners, community forums and design professionals. It should include the social, environmental and economic value of better urbanism, interconnected streets, walkable communities and relinquishing dependence on the car.

The five-minute walkable neighbourhood (in which all basic amenities can be reached with a five-minute walk) should be seen as the basic building block of community building, and should be promoted in a form adaptable to planning at neighbourhood, local, town, city and regional level. The assumption that higher density housing (30-50 units per hectare) cannot find a market needs to be challenged through practice, and used as a tool by agencies in the Growth Areas. In addition, the concept of Enquiry by Design should be promoted to the heart of the planning process on major projects. This approach invites representatives of the stakeholders in a proposed development – the local authority, residents, developers, landowners, voluntary groups, employers and retailers – to collaborate in producing a masterplan.

There is room for much greater awareness of the cohesion, legibility and harmony of correctly scaled and compatible architectural design in building new neighbourhoods. There should be more active dissemination of evidence on the implications of architectural harmony on health and well-being and the impact of positive, enjoyable environments in promoting walking, cycling and positive use of the public realm.

Linking health to the environmental cause

Appropriately enough, it is the environmental considerations, especially a reduction in carbon emissions being brought into play for the sake of our planet's health, that may pave the way for promoting healthier communities. The recommendations of different sections of planning guidance at national level have for several years promoted higher-density, mixed-use settlements that are good for the environment and at the same time

generate higher levels of physical activity (see chapter 2 *Urban planning*). However, in practice this guidance has yet fully to make an impact on local decision-making, and Local Development Frameworks have yet to display clear and positive direction on curtailing car use and promoting more pedestrian-friendly environments. It is another case of what is good for the natural environment and the planet is also good for our health.

What has been done?

Case study

Fairford Leys, Buckinghamshire

Fairford Leys is a new village of 1,900 homes, situated to the west of Aylesbury, in Buckinghamshire. It has its own village centre with a range of traditionally fronted shops, a small supermarket, a Chinese restaurant, a nursery, an ecumenical church, a community centre, and a sports club with a swimming pool.

The centre contains a higher density of housing, with larger, detached properties at the edge of the village. The design includes plenty of play areas, open spaces, playing fields and a golf course. The estate is built on land belonging to the Ernest Cook Trust — a nationally operated charitable foundation with interests in land ownership, conservation, architecture, design and community development. To ensure that the positive aspects of all these concerns are reflected in the achievement of Fairford Leys, the Trust has worked closely with the Aylesbury Vale District Council for over 14 years — largely through its masterplanner, the well-known architect John Simpson — and with the builders Taylor Woodrow, Bellway and George Wimpey Homes.

Fairford Leys provides housing from single-bedroom starter homes to five-bedroom detached properties, which has ensured that its population is representative of all life stages, from young singles, through young and growing families, to the retired and the elderly. The hope that people would want to stay in Fairford Leys, moving house within the village as their family needs change, is already being realised.

Many residents work locally, while others commute, and those who are around during the day have found time to develop initiatives such as the Mother and Toddler Group and the Friendship Club, which are playing a significant role in helping to build a sense of community.

Fairford Leys' success is the promotion of a highly walkable community with distinct centres, which still accommodates the car. It also demonstrates the concept of 'permeability' as the lack of dead ends and culs de sac means that a walker can access their destination in as straight a line as possible. While open space is important, the appealing aspect of Fairford Leys is the access to daily needs on foot, which is most likely to promote the higher levels of daily physical activity across the whole spectrum of residents, from children to the elderly. The Fairford Leys development has been realised through a high degree of collaboration between developers, designers, the trust and local authority, using a masterplan and design code as the principal tools to achieve this. There are also safe cycling and walking routes to Aylesbury town centre and to the railway station.

Case study

Poundbury, West Dorset

In 1987 the local planning authority, West Dorset District Council, selected Duchy of Cornwall land to the west of Dorchester for future expansion of the town. As Duke of Cornwall, The Prince of Wales took the opportunity to work with the council to contribute an urban addition to this ancient market town. Instead of segregating uses, different types of property are mixed throughout Poundbury. Private and social housing are intermingled and built to the same quality and designs.

Commercial buildings – from factories to offices – sit among residential areas, with shopping, community and leisure facilities. Streets are laid out around buildings, creating interesting spaces and naturally controlling car speeds. Parking and services are mostly confined to landscaped courtyards at the rear. The architecture – using local and sometimes recycled materials – draws on the rich heritage of Dorset and, in particular, on the attractive streets of Dorchester itself.

Provincial Pictures

Action

Government

7.1 The Government should promote the adoption of stronger local area planning frameworks, including Local Development Orders (LDOs) that guarantee the delivery of a consistent approach to urbanism, establishing the framework for consistent, high-quality town-making (whether brownfield, urban extension or regeneration) and helping to create places where people can be physically active.

The Treasury

7.2 The Treasury should remove the requirement to pay VAT on refurbishment of property, strengthening the business case for retention of urban forms that are walkable, location-efficient centres.

Department for Communities and Local Government

7.3 The Department for Communities and Local Government should, through its Planning Policy Statements, give greater support to medium-density, mixed-use development with access to high-quality public transport within a 1km walk. The development of more 'residential ghettos' – housing with poor services and facilities – should be discouraged.

7.4 The Department for Communities and Local Government should produce guidelines, to accompany building regulations, that give clear direction to those working within traditional build and renovation to achieve the energy efficiency targets for new building.

Local authority planning departments

7.5 Local authority planning departments should be encouraged to move from a reactive planning mechanism to holistic engagement from the start of the development process (the Enquiry by Design approach). This is in line with current statutory guidance on collaborative planning.

7.6 Local authority planning departments should consider Local Development Orders (LDOs) on larger developments. An LDO goes further than a masterplan because it enables the form of development to be approved even if it is to be delivered through successive phases. These phases then do not require individual permissions. LDOs can embrace the consultation process – which becomes mandatory at the outset. They also facilitate the implementation of quality guidelines, specifically design codes, which create more legible, harmonious streets and public spaces.

Professional organisations

7.7 Architects should re-consider the place of stairs within buildings, and investigate innovative approaches, such as creating attractive central stairs, alongside the traditional lift and fire escape.

7.8 The British Institute of Facilities Management should develop guidance on maximising human movement and interaction within buildings.

7.9 Professional bodies responsible for architectural education should make a further change of emphasis in architectural education (and continued professional development) towards:

- architectural literacy
- contextualisation
- building residential density
- building for flexibility
- a loose-fit, long-life approach to energy efficiency, moving away from forms driven by current technologies
- design codes for urban places, and
- holistic planning, and community and stakeholder participation.

Glossary

biophilia effect	The human response to the natural environments
brownfield site	Abandoned, idle, or underused industrial or commercial facilities where expansion or redevelopment may be complicated by real or perceived environmental contamination
Community Street Audits	Studies of local streets with the local community to identify issues and opportunities to encourage walking
connectivity	The extent to which the routes and paths in an area connect to each other and allow easy access to destinations
DCMS	Department for Culture, Media and Sport
DDA	Disability Discrimination Act
deep plans	Plans for multiple-floored buildings with low ceilings and large floor areas
density	The amount of development per unit area
DfES	Department for Education and Skills
DfT	Department for Transport
DTI	Department of Trade and Industry
EIA	Environmental Impact Assessment
Enquiry by Design	Where representatives of the stakeholders in a proposed development – the local authority, residents, developers, landowners, voluntary groups, employers and retailers – are invited to collaborate in producing a masterplan
exurbs	Settlements beyond the suburbs
greenfield	Land on which no urban development has previously taken place; usually understood to be on the periphery of an existing built-up area
healthy urban planning (HUP)	A type of urban planning that focuses on its potential impact on human health
LDF	Local Development Framework
LDO	Local Development Order

legibility	Locations, streets, open spaces and places that have a clear image and are easy to understand and to find your way around
mixed use	Where more than one land use can be found in the same location, or in the same building
modal share profile	An outline of the proportion of travel undertaken by each mode of transport
modal split	The proportion of journeys undertaken by each mode – i.e. public transport, walking, cycling or car
park and ride (P&R)	A facility to enable commuters or shoppers to park their cars at a designated site and use dedicated public transport to reach their destination
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
public realm	Shared public space
risk compensation	An effect whereby individuals may tend to adjust their behaviour in response to perceived changes in risk. Often applied to issues such as seatbelts or cycle helmets.
RSS	Regional Spatial Strategy
SEA	Strategic Environmental Assessment
TIA	Traffic Impact Assessment
Vision Zero	The philosophy that eventually no-one will be killed or seriously injured within the road transport system
walkability	The general attractiveness of a place to movement on foot

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