

Literature Review of Public Space and Local Environments for the Cross Cutting Review

FINAL REPORT

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1. Introduction

This literature review is prepared for the cross cutting review on public space and local environments. It concentrates on literature produced over the last decade on the subject of public space, but some earlier work is also cited. It covers academic papers and articles, books, government and NGO reports and policy.

The backdrop to this review should be described at the outset. In the UK, as elsewhere, urban and, increasingly, rural development processes have changed over the last two decades. Development companies have become larger, more complex and more powerful (Madanipour 1999). They have also become less numerous and have utilised new construction technologies. Financing has also become more national and international, rather than local. Investors and developers have, by this process, become less concerned with the cultural and emotional value of public space. Instead, they regard it as a commodity. Consequently, built form has changed significantly.

At the same time, the fear of crime has been a major reason for people abandoning the public realm and the role of public authorities in the public realm has declined (Miethe 1995, *cited in* Madanipour 1999). Therefore, new additions to public space are more often developed and managed by private investors. To protect and maximise their investments these spaces tend to be managed for exclusive uses, undermining their public dimension. The trend towards more privatised public space can improve the quality of the space and people's quality of life, but it can undermine public life for others, especially those who feel excluded. This pattern of development can be seen in new (and increasingly privatised) civic spaces in towns and cities, housing developments and shopping and leisure spaces.

This trend has given rise to a realisation of the important role public space plays in people's lives. It is partly responsible for the current interest in urban design, town centre management, an 'urban renaissance' (Urban Task Force 1999), city marketing strategies and quality of life issues. Hence, much of the literature reviewed concentrates on promoting public spaces that are positively defined and accommodate an inclusive mixture of people and activities (*for example* Madanipour 1999).

2. How can a 'good local environment' be defined?

In seeking to define 'good local environments' it is important to first be clear about how the public realm is defined. So, in undertaking the review, a generally understood definition of public space and local environments was sought. A clear definition of public space is lacking, and definitions in official documents are becoming inappropriate as the nature of ownership and management of public space changes. Madanipour (1999) defined public space as those areas within towns, cities and the countryside that are physically accessible to everyone, where strangers and citizens can enter with few restrictions. Some have sought to expand the concept of public space to mean 'any place that people use when not at work or at home' (Shonfield 1998), while others have expanded the concept into 'cyberspace' (Crang 2000; Holmes 1997). A review for the Scottish Executive Central Research Unit (Kit Campbell Associates 2001, para. 5.11) tackled the problem of defining open space and suggested that a common typology was absent from national guidance and legislation. The report recommended that a typology be made up as Table 1 suggests.

Table 1: A Typology of Open Space

OPEN SPACE	
Any unbuilt land within the boundary of a village, town or city which provides, or has the potential to provide, environmental, social and/or economic benefits to communities, whether direct or indirect.	
GREEN SPACE	CIVIC SPACE
A subset of open space, consisting of any vegetated land or structure, water or geological feature within urban areas.	A subset of open space, consisting of urban squares, market places and other paved or hard landscaped areas with a civic function.
Parks and gardens Amenity greenspace Children's play areas Sports facilities Green corridors Natural/semi-natural greenspace Other functional greenspace	Civic squares Market places Pedestrian streets Promenades and sea fronts

Source: Kit Campbell Associates (2001)

However, the definition presented in Table 1 excludes several spaces that the cross cutting review will be considering. Most notable is the absence of the public space that transport operators manage such as stations, terminals and transport interchanges. Also, while 'pedestrian streets' are included, residential streets are not, yet these constitute valid public space.

The literature review revealed many attempts to draw up lists of characteristics of 'good local environments'. These come from theoretical work on public spaces and urban design, and from empirical work asking different stakeholders their opinions of public open space. Clearly, characteristics of good public space depend upon the user and the purpose of the space. However, there have been several attempts to draw up generic lists.

Much of this material was drawn together by CABE and DETR (2001) in *The Value of Urban Design*, following on from *By Design* (DETR and CABE 2000) which analysed the characteristics of successful public spaces. Both reports provide seven objectives that constitute a framework for good urban design, and as such are key determinants for 'good local environments'. The formulation of these objectives took into account the general public's view of what constitutes successful public space. This view is often neglected, but is strongly advocated (see Alexander 1977; Lynch 1960). The objectives emerged from extensive research and are included in government guidance, giving them considerable legitimacy. The report suggests that successful streets, spaces, villages, towns and cities have common characteristics. These are:

- **Character** – places should have their own identity, responding to and reinforcing distinctive patterns of development and culture.
- **Continuity and enclosure** – public and private spaces should be clearly distinguished, and the continuity of building frontages should be promoted.
- **Quality of the public realm** – places should have attractive and successful public spaces that work well for all users, including disabled and elderly people.
- **Ease of movement** – places should be easy to get to and move through. Places should be inter-connected and put people before traffic while integrating land uses and transport modes.
- **Legibility** – places should have a clear image, be easy to understand and easily identify the purpose of the space. They should provide recognisable routes and landmarks to help people find their way around.
- **Adaptability** – places should be capable of changing in response to economic, social and technological conditions.
- **Diversity** – places should have variety and choice. There should be a mix of appropriate developments and uses that meet the local needs of all sectors of society.

The USA-based *Project for Public Places, Inc.* is an influential non-profit organisation offering technical assistance, research, education, planning and design. From experience in over 1000 public space projects, it has found that successful public spaces should perform four main functions: **access and linkages**; **purpose and activities**; **comfort and image**; and **sociability** (Project for Public Places, 2000). It also suggests the reasons that many places fail, as: lack of places to sit; lack of gathering points; poor entrances and visually inaccessible spaces; features that are not functional; paths that don't go where people want to go (or a lack of paths where people want to go); domination of a place by vehicles; blank walls or dead zones around the edges of a place; inconveniently located transport stops; and a lack of things 'going on'.

Different views of 'good local environments'

As already stated, more specific visions of what constitute good local environments depend on the type of space in question and the stakeholder being asked. Clearly, generalised definitions of 'good local environments' are useful but different groups of stakeholders will have different priorities. These priorities are related to the interests that a particular stakeholder has, and these interests are in turn related to the numerous functions that public spaces serve.

CABE and DETR (2001) have drawn together evidence that shows the motivations of different stakeholders and their concerns for urban design, which are useful for categorising public space interests as well.

In summary, the stakeholders are grouped as:

- **Private interests**: This group includes landowners, developers and businesses, and is mainly motivated by economic gains. They are interested in the economic function of local environments and their priority is maximising returns. Hence they want any interventions they have in the public realm to be value for money and easy to manage. Their definitions of 'good local environments' concern benefits to profitability, reduction in management costs and reduction in long-term running costs.

- **Public interests:** This group includes local authorities and emergency services, including police, and is mainly motivated by meeting public needs, such as providing safe public spaces that are accessible for all. It is concerned that functionality is maximised but also that economic, social and environmental goals are not compromised. In many instances the local authority will also be the owner or manager of the public realm, and in this role cost issues also motivate it.
- **Community interests:** This group includes amenity groups and local people. They are motivated by protection of property prices and local needs. They see good local environments as ones that reflect local preferences and are contextually compatible.

Good public space is, therefore, as dependent on the audience that perceives it, as it is on the type or quality of space itself. Public space must reconcile public and private aspirations, as well as economic, social and environmental functions. Private interests are overwhelmingly economic and public interests are of social amenity. Clearly, the environmental dimension is also important. Frey (1999) and Rudlin and Falk (1999) assert the environmental value of urban open space and green space, and its provision is a key design principle for creating the more liveable places as also suggested by the Urban Task Force (1999). However, the environmental dimension is often relegated in discussions about open space planning and value.

Public perceptions of ‘good local environments’

Literature on what different stakeholders perceive to be ‘good local environments’ is patchy in coverage. The majority of it concentrates on the public’s perceptions of town centres and retail areas. For example, DoE and ATCM (1997) assessed public interest in order to devise good practice guidance for town centres. Their research involved a literature review to identify current thinking on successful urban spaces, a survey of 285 local authorities that had implemented enhancement schemes and case study appraisals of 20 successful schemes. While their definition of urban spaces in town centres includes streets, footpaths and squares, it excluded most green spaces and privately owned/managed public space such as transport interchanges. They found several elements in common with DETR and CABE’s list (above), but they also cited cleanliness, a lack of graffiti, low transport emissions and quietness as preferred qualities. They also found that, in terms of amenity provision, the public wanted: good pedestrian routes and car parks; cycle routes; provision of benches and other street furniture; places to meet and shelter; toilets; improved public safety and security; clear sign posting; and access for all. The DoE and URBED (1994, 152) examined city centre economic vitality and viability and suggested that public space required high quality street design to balance access and amenity, allowing people to move about with safety and comfort. This research was extensive, involving consultation seminars with experts, questionnaires to planning officers, case studies and a rigorous methodology to define town centres and accurately measure vitality and viability.

A body of prescriptive literature exists that identifies factors that make successful public spaces (Whyte 1980; Bentley *et al* 1985; Tibbalds 1992; Gehl 1996; Gehl and Gemzøe 1996; DETR and CABE 2000; Project for Public Spaces 2000; Gehl and Gemzøe 2001). Research by Hass-Klau *et al* (1999; *see also* Hass-Klau 1990) attempted to identify factors that make urban spaces popular through empirical research in five UK, three German and three Italian towns. This involved questionnaires (7,600 in total), observational studies and case studies carried out between 1994 and 1997. Their conclusions were that contemporary urban spaces often lacked informal and formal space for sitting and relaxing; something to watch (other people or a water feature); sufficient pedestrian through-flow; and importantly, ‘ambience’. This research also noted that people in urban areas did not mind modest levels of traffic, although they generally preferred ‘pedestrianised’ streets. It also concluded that, in general, people enjoyed town centres that are compact and well integrated. Research by the University of Sheffield (for Boots the Chemist and Marks and Spencer plc) looked at children’s requirements for good public space (Departments of Landscape and Geography, University of Sheffield 1994), and found that they wanted clean streets and less litter, graffiti and traffic. They were also very concerned about anti-social behaviour, especially alcoholics in city centres, and they wanted better places to meet and more street furniture.

There is also some attitudinal research on what people want from green open spaces and parks. Recent research for the government’s *People’s Panel – Wave 5 Research* (MORI 2000) found that expectations of parks included safety, cleanliness, tidiness and provision of separate areas for dogs. The Panel also found that accessibility by the entire community was important.

Hence, much of this literature reveals a common list of key requirements. While the majority relates to town centres and parks, anecdotal evidence indicates that many of the same qualities apply to neighbourhoods, residential areas and other public spaces. The key priorities, for the public at least, are safety, cleanliness, and a space that serves its purpose.

3. What is the current state of public space in the UK? Has it changed over time? And what do people think of it?

There are no regular national surveys that monitor the quality of public space in the UK. Hence, assessing the state of public space over time relies on *ad hoc* surveys and anecdotal evidence. This is complicated because most of this work concentrates only on specific types of public open space such as city centres or parks. Also, much of the research is quite dated.

As an example, in 1994 Hillier Parker conducted a comprehensive questionnaire survey of 150 local authorities on the quality of public realm in town and city centres. It reported a series of positive and negative aspects of the state of public space in town centres. The positive findings were that:

- Over 80% of town centres had significant capital improvements in the previous three years;
- 87% planned to carry out significant capital improvements over the following three years (landscaping and street furniture additions are the commonest of planned improvements);
- Quality, rather than cut-price, solutions were being sought;
- More than two thirds of town centres were swept at least twice a day;
- Over half of councils were actively trying to 'plan out crime' by lighting and vandal-proof furniture;
- Over half of local authorities made grants available for private façade and shop front improvements;
- Over 60% of local authorities monitored the public realm on a regular or frequent basis; and
- Two in nine town centres had a town centre manager.

However:

- Budgetary constraints were imposing real problems on the ability of local authorities to make planned town centre improvements;
- For one in five town centres, it had been five years since major capital investment in the public realm;
- Around 40% of local authorities did not have a planned maintenance programme and budget for the public realm;
- Around 50% of main shopping streets are never high pressure washed; and
- One in five local authorities had no security policies; two thirds did not have CCTV, and less than one in five had security patrols (this may be seen as positive if these services are not deemed necessary).

In conclusion, Hillier Parker found that the state of public space of town centres was generally declining, which would ultimately make them uncompetitive with out-of-town shopping centres that would continue to be maintained to a high standard. Hence, concerted action by local authorities was recommended to improve management, attractiveness and functioning of town centres. DoE and URBED (1994) also identified attitudinal evidence on the health of town centres. Local authority planning officers described their town centres as stable (45%), improving (29%), declining (19%) and vibrant (6%). Hillier Parker's report was a preamble to planning policy guidance on town centres and retail development (PPG6) which it was hoped would "... shift the balance back in favour of the town centre option" (Hillier Parker 1994, 13). Planning policy advocated assessment and improvement of the vitality and viability of town centres (DoE 1996a).

The decline in the quality of urban public spaces identified by Hillier Parker formed the subject of a similar inquiry by the House of Commons Environment Transport and Regional Affairs Committee in 1998-1999 (HoC 1999). The Committee examined whether urban parks and open spaces had declined, the seriousness of decline and possible remedies. However, it identified an 'information deficit' and concluded that comprehensive data on the number of parks and public open spaces, their condition and their usage is largely absent. It also noted that a standard for the minimum amount of parkland needed in towns was absent (although for sport, the 'six acre standard' per 1000 people is used by local planning authorities throughout the UK). Development plan policies specify open space provision in new housing developments and where the development is too small to accommodate open space (e.g. below five dwellings), commuted sums for provision off site is sometimes required. In response to this report and the Urban White Paper (DETR 2000c), the government has established the *Urban Green Spaces Task Force* that has recently published its Interim Report and begun a public consultation process (Urban Green Spaces Taskforce 2001).

Despite 'the statistical vacuum' the Committee was presented with 'plenty of evidence' about urban parks and open spaces (HoC 1999 para. 32-52) showing that urban parks do make a positive contribution to the quality of urban life and the urban economy. Despite the acknowledged value of urban space and parks its Report also drew attention to the decline in the quality of such spaces. Funding problems and the demise of the park keeper are identified as salient causal factors in this decline.

The Committee's findings were similar to those in 1994 from an eighteen-month research project, carried out in partnership with twelve local authorities (Comedia and Demos 1995). The project surveyed the use of 'parks' (which includes a whole range of urban spaces from children's playgrounds, urban farms and school playing fields to traditional town parks) in the twelve participating local authority areas during the summer of 1994. In the course of the research 10,250 park users were observed, 1,211 were interviewed and 295 household questionnaires were returned. One of the most significant findings was how important parks are to young people. By contrast elderly people were under-represented as park users both in comparison with other age groups and in proportion to their presence in the residential areas surrounding the parks (ibid., 50). The behaviour of young people in parks was found to be one factor that deterred some elderly people from visiting. Comedia and Demos (1995) found that more than 40% of respondents used their local park daily and that of all respondents one third came alone, one third came with another person and one third in larger groups. A number of groups in society, in addition to elderly people, were under-represented in their use of parks (in proportion to their percentage of the total population), including ethnic minorities, women and people with disabilities.

The study showed that "successful parks – and there are many of them – fulfil many complex needs, and often in highly sustainable ways" (Comedia and Demos 1995, 3). However, the study identified many other open spaces that the public felt to be in decline or empty and bleak. Problems such as vandalism, dog mess and fears about safety were also highlighted by the research. Under-funding, an unequal balance between park maintenance and park development, and the low status that parks provision *vis-à-vis* indoor leisure facilities in local authority political culture were pinpointed as significant elements in the decline of urban open space. The research failed to establish why certain parks were successful and others were not.

Recently, the condition of the UK's parks has been comprehensively assessed and for the first time a national overview of public park provision exists (Urban Parks Forum 2001). The 'Public Parks Assessment' study was jointly commissioned by the DTLR, Heritage Lottery Funds, English Heritage and the Countryside Agency. The principal aim of the study was to establish need in relation to all public parks, to better inform decision-makers whilst at the same time creating a database of local authority owned public parks and recreational open space. Information on the condition of parks and open spaces and the annual revenue expenditure over the last 20 years was gathered from local authorities throughout the UK by way of a written questionnaire. The survey shows that, nationally, the public has access to over 27,000 public parks, covering 143,000 hectares, and local councils spend around £630 million to maintain and develop these areas (Urban Parks Forum 2001). Based on trends in local surveys it is estimated that there are 1.5 million park visitors annually. The People's Panel ratings tend to place parks in the 'high satisfaction' rating of local council services (LGA 2001). Additional work for the *Peoples Panel – Wave 5 Research* (MORI 2000), found that 28% of respondents were very satisfied with their parks and open spaces while 53% were only fairly satisfied.

However, despite the importance of parks the Urban Park Forum's assessment study showed that, generally, urban parks in the UK (at least those controlled and run by local authorities) are in serious decline. Local authority park revenue budgets have decreased by around 20% over the last 20 years and since 1979/80 the cumulative revenue expenditure deficit is estimated to be in the region of £1.3 billion. The Forum reports that: "Historic parks have in general fared worse than recreational open spaces during this period with significant loss of features and disproportionate reduction in revenue expenditure... Park stocks are beginning to become polarised with good parks getting better and poorer parks getting worse and in the most deprived authorities these trends are further exaggerated" (Urban Parks Forum 2001, Executive summary).

As part of the study local authorities were asked to make an assessment of the current condition of their park and open spaces stock viewed as a whole. The results showed that 18% described their park stock as 'good', 69% described it as 'fair' and 13% described it as 'poor'. The survey results also chart the demise of traditional park features such as shelters (28% loss), bandstands (58% loss), lakes (17% loss) and facilities including toilets (29% loss) and cafes (24% loss) (Urban Parks Forum 2001). Winkey (2001) states that despite major grants from the Heritage Lottery Fund, the scale of the problem remains huge.

Clearly, under-funding is a major element in the decline of urban open space but there are other issues concerning the management of parks. Notwithstanding the insufficiency of local authority park revenue and capital budgets there is no doubt that some parks and urban spaces are 'successful' and this may have more to do with management strategies (see Section 6 'Management' below).

Besides local authorities there are other groups and organisations that focus on improving and maintaining urban open space. *Groundwork*, for example, comprises 40 locally organised Trusts, and is an environmental land regeneration charity which works in partnership with local people, local authorities and business to promote economic and social regeneration by improvements to the local environment. Groundwork is involved in over 3,000 projects, many of which focus on the regeneration of urban derelict land to open space for use by local people. To date there is no independent assessment of these projects.

Overall, the literature shows that while comprehensive information is available on the condition and funding of green space the same is not true for civic space. In both cases, however, the evidence, whether anecdotal or exhaustive, points to a decline in the condition of public open spaces. The main cause of this decline appears to be funding problems and the absence of effective management strategies. This requires further investigation and research. At the local level, there is little consistent published data available on users and uses of urban parks (Swanwick *et al* 2001).

Having identified a lack of data on the state of the public realm in the UK it should be stated that the chances of acquiring better information in the future are increasing. The Audit Commission is currently engaged in a Best Value Inspection of local authority services relating to 'streetscene' and results are due in late December 2001 (H. Goulding, Best Value Inspection Service, Audit Commission). The inspection intends to consider all the work of councils in caring for their streets, and will investigate maintenance and management issues.

In addition, some elements of public space are now Headline Indicators of Sustainability (DETR 1999; DETR 2000a), so better data should become more readily available under this initiative. The Audit Commission (2000; 2001) and the DETR (2000) have also examined quality of life indicators, some of which are particularly relevant to public spaces. This has two-fold importance. Firstly, it makes the case for the relationship between a 'good local environment' and a good quality of life, and secondly, it provides a tool with which to measure quality of life, and ultimately to create better public space. Of the quality of life indicators assessed by the Audit Commission (2001), there are social and environmental indicators relating directly to public space, however there are no economic indicators of direct relevance. Social indicators are: reducing drug-related crime; noise; community well-being (satisfaction with local area) and access to key services, and environmental indicators are: hectares of parks and green spaces per capita; clean streets; and the change in natural and semi-natural habitats (Audit Commission 2001).

4. What are the underlying factors that undermine public space?

In reviewing the literature key factors were repeated time and again as undermining the quality of public space, or its use. These were traffic, business activity, anti-social behaviour and crime, poor design, conflicting roles and privatisation of the public realm.

Traffic

In attitudinal research, traffic is regularly reported to be a key problem in open space for users. Negative traffic impacts are clear: reduced safety for other car users, pedestrians and cyclists, vibrations, noise, air pollution, fear (especially for children), the prevention of movement in places, intrusive parking, and environmental damage and degradation. The *Survey of English Housing* (DTLR 2001a) showed that negative effects of transport (traffic, parking and air quality) impact equally on all residential districts. Traffic's effects on public space itself and on the way that people use that space have been documented.

Mayer Hillman has catalogued the negative impacts of traffic that damage the environment and deter people from cycling and walking (Hillman 1996), concentrating on the impact of heavy traffic on children's use of public space. He has described the knock-on effects whereby parents discourage their children from walking and cycling because of perceived traffic danger, the children are then driven by car – especially to school – which increases the traffic and in turn leads to fewer pedestrians, increased traffic nuisance such as air pollution and a less vibrant neighbourhood. Other consequences are decreased levels of fitness in children and increasing levels of obesity. Clearly, this pattern of events also undermines national transport policy aims to reduce car use. Heavy traffic can also undermine open space use for children's play. Recent empirical research for the Children's Play Council (*cited in* Gill 2001) indicated that over a quarter of children interviewed played in the street and 16% claimed it was their favourite place to play, second in popularity only to parks. But many parents discourage children from playing in the street, and in heavy traffic areas it is impossible. Even when traffic is calmed, limiting speeds to 20 mph has little effect on making roads safe to play in. Allott and Lomax (1992) have found that to significantly change the function of the street, more stringent measures, such as road closures or changing the nature of the road to reduce speeds to 10 mph or less are needed.

There is also evidence that high traffic volumes have negative effects on the social function of public space. While there is limited empirical research on the relationship between traffic and public space use in town centres, it is evident that heavy traffic can prevent streets being used for social interaction. The most conclusive evidence on this in a residential setting comes from Appleyard (1981) who comprehensively studied three similar residential streets in San Francisco characterised by heavy, medium and light traffic flow. People on 'light street' (2,000 vehicles a day) were found to have three times as many friends and twice as many acquaintances in the neighbourhood as those on the 'heavy street' (16,000 vehicles a day). Also, in mapping exercises, people on the 'light street' considered the whole street to be their home territory, whereas residents of the 'heavy street' regarded it to be a smaller area around their own building. The conclusions drawn were that heavy traffic has a negative effect on public interactions and changes the manner in which public space is used.

Further research from the USA shows that heavy traffic can have an isolating effect that can lead to crime (Engwicht 1992; 1993). As heavy traffic acts against 'liveable streets' it isolates local residents in their homes. Crime may then manifest itself in numerous ways due to this: alienation may lead to frustrations and violent acts; and houses are overlooked by fewer walking passers-by – just 'anonymous' through-traffic – leading to greater opportunities for crime. These factors then compound car-usage as a means of refuge from (perceived) unsafe public spaces. After extensive research, Engwicht (1992) claimed that where a city's transport priorities are public transport, walking and cycling, a greater amount of human interaction and community exists. This research is worrying in the UK's context where the car is the most common mode of transport, even for local services (Office for National Statistics 2000). Seventy-seven percent of main food shopping trips and 72% of trips to hospital are made by car. Walking is only more common than car use for visits to the Post Office, chemist and GP surgery. The trend for increasing car use for local services is evidently undermining the government's policies for sustainable environments and the Urban Renaissance.

This said, while much of the research suggests that traffic stifles public spaces, there is also evidence that total traffic exclusion also has negative impacts, particularly on commerce and safety (see Hass-Klau *et al*, 1999). However, this is under-researched and has not been quantified. In general, urban designers attempt to allow moderate traffic flow, but to 'calm' or slow it to redress the balance between car users, cyclists and pedestrians.

Business activity

There is considerable anecdotal and professional evidence that business activities often have a negative impact on the public realm, although research in this is lacking. The key concerns are that businesses: produce noise and pollution; damage and disrupt streets and pavements; cause increased amounts of refuse and littering; attract nuisance behaviour; and fail to control it. The latter is particularly true of take away food outlets, pubs and nightclubs. Also, town centres have become increasingly pedestrianised, and this has caused conflicts such as parking and delivery access problems. The pedestrianisation debate has been clearly argued by DoE and ATCM (1997). Much of the literature concentrates on problems of the public environment *on* business activity. Rarely is the negative impact of business on the public realm mentioned, and is not supported by hard evidence.

In relation to transport operators, some evidence exists of the impact of street furniture on the public realm. Neale *et al* (2000) undertook literature reviews, interviews with local authorities and transport operators and assessments of bus shelter provision and design. They suggest that dirty, unattractive bus stops and shelters lacking in information can have a negative impact on public space and give a bad impression of the transport operator. Pharoah (1995) suggests that integration of public transport stations, shelters and bus stops with the community is a matter for transport operators and local planning authorities in partnership. This, he claims, has not been successful in the UK to date. Neale *et al* (2000, 60) suggest that many town centre design strategies focus on history and heritage, which can be out of step with transport operators who wish to convey a modern image, not one of old fashioned transport. Transport infrastructure can also add to the clutter of signage, posts bollards and the like that can damage the appearance and accessibility of civic spaces. Davis (1995, 48) identifies this problem and suggests that local authorities alone cannot prevent it because they do not have full control. Instead, much of the street furniture is required by legislated standards and/or is in the control of another authority.

Anti-social behaviour and crime

There is extensive research on the relationship between anti-social behaviour, crime and public space (Oc and Tiesdell 1997; Newman 1972; Poyner and Webb 1991; Coleman 1990). Actual and perceived rates of crime and anti-social behaviour have been proven to have a serious impact on public open space use. When use declines, a vicious circle often sets in – fewer people lead to less surveillance, which in turn leads to more crime.

Anti-social behaviour is difficult to classify and quantify. It can include racial harassment, verbal abuse, noise, unruly behaviour, intimidation and violent behaviour, littering and graffiti. The *English House Condition Survey*

1996 (DETR 1998a), the *Survey of English Housing: Housing in England 1999-2000* (DTLR 2001a) and *2000/01 Survey of English Housing: Preliminary Results* (DTLR 2001b) provide empirical data to prove that problems of anti-social behaviour are felt most acutely in urban areas, and especially in the most deprived neighbourhoods. For example, almost twice as many urban residents complained of noise than did suburban residents (DTLR 2001a). The following problems were perceived as serious in all areas (mean average figures from England): litter and rubbish (13%), crime (12%); dogs (9%); vandalism and hooliganism (8%); noise (6%); graffiti (4%); and racial harassment (1%) (DTLR 2001a). Overall, almost all forms of anti-social behaviour are more severe in deprived areas. To summarise:

- Problems with upkeep and use of urban public space (litter, run-down neighbourhoods, vandalism and graffiti) are more clearly linked to relatively deprived neighbourhoods – and particularly those dominated by social sector housing (DETR 1998a).
- Due to concentration in urban areas, black and minority ethnic (BME) households are more likely to experience these problems than white households. This relationship is stronger within deprived neighbourhoods (DETR 1998a).

Graffiti and vandalism are also disproportionately found in disadvantaged areas. Research in the US found that the incidences of these have an impact on residents' anxiety, economic decline and the escalation of more serious crimes (ENCAMS 2001b). The highest rates of vandalism occur in areas with obsolete facilities, poor street lighting, overgrown parking areas, low community morale and little pedestrian traffic. In the US, the costs of treating graffiti were estimated at approx. \$7 billion per annum (ibid.).

A similar picture emerges in relation to littering. ENCAMS (2001a) undertook attitudinal research for the 'Tidy Britain Group' and found that: areas that already had a litter problem exacerbated littering – more evidence of knock-on impacts and a spiral of decline; city centres were considered to have litter problems, shopping areas and high streets were major problem areas; 'council' estates were considered problematic, respondents believed this was due to poor education and parenting; and in rural areas, litter was much more noticeable. Research for the 'Tidy Britain Group' also examined litter abatement strategies in 33 countries (ENCAMS, 2001b). Active campaigns exist in many countries, and while conclusions from this research are still in the draft stage, there appear to be lessons for Britain to learn.

Some public spaces, particularly in town-centres, have faced difficulties associated with alcoholics, drug-users, vagrants and other 'undesirables'. These people are often viewed as causing conflict in public spaces and are commonly dealt with in authoritarian ways. Often, this has been addressed by attempts to 'design-out' the perceived problem (Whyte 1980) by making spaces unwelcoming, removing seating, preventing eating and regulating against loitering. However, Whyte argues that this defence of space acts against safety and that the more attractive and usable a space is, the safer it will be.

There is no empirical evidence to show the exact extent to which anti-social behaviour undermines public open space use, and there is a lack of hard facts on incidences of anti-social behaviour (Social Exclusion Unit 2001), but there is evidence of downward spirals of decline. High crime levels are also known to reduce investment by the private sector and homeowners (DoE and ATCM 1997). Hence, in terms of area regeneration many advocate a 'zero tolerance' approach as a first step in encouraging people back into the public realm, engendering a sense of ownership.

These findings are interesting given national crime statistics. The British Crime Survey 2001 (Home Office 2001) reported a drop in almost all types of crime in 2001 and also a reduction in the general fear of crime. But problems in relation to public spaces are still significant: 13% of respondents felt 'very unsafe' walking alone in their area after dark and 20% felt 'a bit unsafe', and this has remained stable over time. Thirty percent of respondents said they never walked alone in their area after dark. This was higher for women (43%) and for those aged 60 or over (66%). However, the reason for this is not always crime itself. In fact 8% of the sample cited *fear* of crime as reasons for going out after dark less than once a month or never. Hence this is a major discriminatory variable in society's use of open space.

Poor design

Design can have a major impact on the success or failure of the public realm. Much literature concentrates on simple design problems at the local scale: such as bus stops which hinder pedestrian flows; pedestrians denied proper waiting room at crossings or traffic lights; use of poor quality or inappropriate materials; poor transport integration; and inappropriate street furniture, landscaping, art and lighting (DoE and ATCM 1997). Design features such as disused cycle parks, sculptures and fountains that fail to attract people give a reinforced message that a space is not 'working' (ibid.).

Another design problem is the number of town and city centres which are still dominated by the engineer-driven enhancement schemes of the 1970s. Engineers concentrated on vehicular flow and segregated pedestrians from transport routes (DoE and ATCM 1997, 17-18). Such places require massive investment to make them more liveable.

Design at the larger scale is also important for the success of public space. There are two distinct schools of thought in this respect. From the 1970s an important body of work was produced by Newman (1972), Coleman (1990) and others who advocated 'territoriality and defensible space' – making the public realm more defensible and thus protected from crime and more hospitable, resting on the assumption that crime is directly related to design. This work advocated the use of cul-de-sac patterns and segregated neighbourhoods that excluded strangers. It was widely accepted by built environment professionals and the police for some time, and its impacts can be seen in residential layouts since. However, it has been argued by others that these results are inconclusive and that design is not a major factor in the creation or reduction of crime, although it may have an important effect on the fear of crime (Smith 1987; Poyner 1983; Poyner and Webb 1991). More recently, Hillier and Hanson (1984), Hillier (1996) and others argue that making space more defensible actually makes it more vulnerable by concealing areas from public gaze. Instead, they advocate neighbourhoods and public spaces which allow pedestrians to move through freely, are well integrated with other areas and do not result in dead-ends. Safety comes, therefore, from the observations of people on the street and the ability of residents to overlook public areas and other properties. Shu (2000) has used this theory – developed by Hillier from his 'space syntax' methodology - to typify the types of urban form that deter (and concentrate) crime. Research based on three case studies in socio-economically distinctive towns found that the positive features of residential housing layouts were good integration with other areas and logical access, more in-line neighbours overlooking roads and each other, and through roads. In brief, traditional street layouts that take people to and from places other than their homes can enable crime prevention and contribute to 'good public space'. Negative features of layout arise from the following elements: poor integration and links with other areas and poor logical movement; few neighbours in-line with each other and overlooking spaces and other homes, and culs-de-sac.

Conflicting roles

Public space can be undermined when it has conflicting roles. This is particularly a problem in mixed use areas such as city centres (DoE and ATCM 1997). For example, a requirement for ease of movement can conflict with servicing requirements – e.g. delivery to stores. Similarly, conservation requirements can conflict with provision of access for all. In many city centres these conflicting requirements have not been resolved and make the public space unsafe and unattractive for some users.

Another instance of conflicting roles often arises with vacant sites. Such sites (particularly in urban areas) are regarded by many to symbolise misuse of land resources and are merely awaiting the right conditions to be brought into built use. But, much vacant land is also used as public space (The Guardian 1986; Bennett and Rutherford 1979). In Stoke-on Trent, research found that children used half of the sampled vacant sites as informal play areas. The study also found that some sites were regularly used as through routes (important to consider when sites are eventually developed) (Woodward 1988). Research indicates that informal play areas are just as relevant public spaces for children as are formal playground facilities. DoE (1974) found that formal play areas supported 2-13% of all visits and 'wild' areas received 2-16% of visits. Another study (Parkinson 1985) reported very similar findings. Hence, there are conflicts over issues such as safety when these sites are used for informal uses, and there are also sometimes conflicts when such sites eventually become developed because neighbourhoods lose an amenity.

Similarly, children's use of other spaces in the public realm can cause conflict. Millward and Wheway (1997) examined twelve housing estates in England to ascertain children's use of public space. Children used all available areas for play, not just designated playgrounds. They required public space for many activities such as physical play, quiet games, for social contact and to play on bikes. Individual spaces were used for a short time, and moved between spaces where possible. Most children played where they could 'see and be seen'. They concluded that policies to 'corral' children into 'safe places' would limit play opportunities and probably fail. Also, for children to fully exploit the public space of their estates traffic speeds need to be reduced to 10 mph and visibility of pavements and roads needs to be clear. Children were observed to be playing mostly in the following areas: roads/pavements (46%); public open space/grassed areas (18%); gardens (14%); and play areas (12%). Here, clearly there are conflicts between the priorities of car users and of children and their families.

Privatisation of the public realm

In cities, towns and villages public space has traditionally been publicly owned and managed, and freely available to all, serving a variety of functions. However, the literature suggests that there is an increasing trend towards privatisation of the public realm. Shonfield (1998) defines the public realm as any place that people use

when not at work or home; and furthermore, those citizens who are excluded from work and housing should not be excluded from 'the city's third space', being public space. Modern life has blurred the boundaries between work and home life; more people live alone and more people work from home. Thus, public space is arguably more important than ever for supporting greater sociability and community. Public space should be safe, accessible and inclusive to create what Shonfield (1998) terms 'the spatial experience of democracy'. Similarly, Bentley *et al* (1985, 9) define their concept of 'responsive environments' as "the idea that the built environment should provide its users with an essentially *democratic* setting, enriching their opportunities by maximising the degree of *choice* available to them".

Given this significant role of public space it is important to understand why and how it has become privatised. Until the 1960s, public transport was the dominant mode for work and leisure activities. This was well suited to town and village centres (HMSO 2001). As car ownership grew, these traditional areas were slow to respond and in many ways, unable to – resulting in traffic jams and little car parking provision. In the 1980s the phenomenon of out-of-town shopping centres took off as a response to the problems associated with traditional retail and leisure areas and as a manifestation of changes in the development industry (see Introduction). A relatively recent type of public space, shopping centres such as *Meadowhall*, Sheffield or *The Metro Centre*, Gateshead, provide a "themed retail setting [that] is no less than a stage of consumption" (Biddulph 1993, 39). This function is determined by **security** (guards, CCTV and well defined public/private boundaries); **image** (places are given a distinctiveness); **management** (to maintain image and maximise retail activity); and **secondary consumption** (shopping centres often provide fast food, cinemas and other entertainments in addition to traditional retailing). At its peak in 1989, 74 new out-of-town shopping centres, retail warehouse parks and factory outlet centres were completed in Great Britain (HMSO 2001). This trend has created a new kind of public space – one that is privately owned, has the principal objective of retail, is highly managed and often excludes 'undesirables'. Many traditional town centres have declined as a result of these developments, which have had an adverse impact on traditional town and village centre public space and on the 'services' that they offered. There is also evidence that these types of spaces exclude certain sectors of the population: those without access to cars, those with less disposable income and the less mobile. DoE and URBED (1994) suggest that functions of town centres, in addition to retail, will drift away. Also, shopping centres and the like have exacerbated car usage, causing congestion, noise, pollution and inevitably unsustainability.

Indeed, awareness of the inherently unsustainable nature of out-of-town developments, and partly in reaction to the threat to traditional town and village centres, planning policy guidance was introduced (PPG6) to control such developments, applications for which (above 2,500 square metres) must be dealt with by the central planning authority (DoE 1996a). PPG6 aims to sustain and enhance the vitality and viability of existing centres by focusing retail and leisure developments at these centres. It promotes plan-led identification of sites in order to guide major retail and leisure development to appropriate locations within town centres. Importantly, it puts the onus on the developer to identify such sites before other options are considered. The Government's response to the Environment Committee's fourth report on shopping centres affirmed its commitment to this policy and advocated monitoring of its effects. Research to evaluate the effectiveness and impact of PPG6 is presently (November 2001) being carried out for the DTLR's planning division. *Social Trends* suggests that since the introduction of PPG6, the number of new large developments has decreased each year and retailers are re-focusing their attention on town centres (HMSO 2001).

In the US, Kayden *et al* (2000; *see also* Banerjee 2001) have comprehensively documented and researched the privately owned public spaces of New York (503 in total). They conclude that the impressive quantity of this space is not matched by a similarly impressive quality. While more demanding zoning design standards and discretionary approval processes have begun to improve quality, increase patronage by the public, and provide greater satisfaction, this is being undermined by denial of public access, annexation of private uses, and removal of public amenities. Surveys in 1998 found that nearly half of all New York's buildings with public space failed to meet the applicable legal requirements in ways ranging from 'minor infractions to serious violations' (Kayden *et al*, 2000).

5. What are the causal relationships between public space and broader economic and social problems and benefits?

The relationship between public space and social issues

There appears to be a relationship between levels of deprivation in an area and the condition of the public realm. Empirical research consistently shows that public space in deprived areas is poorer than in more affluent areas. The *1996 English House Condition Survey* (DETR 1998a) for example, reports that in the 88 *Neighbourhood Renewal Fund* (NRF) priority districts twice as many dwellings were affected by poor air quality than in other

districts (32.3% compared with 16.3%); litter, rubbish and dumping was experienced almost fourfold in deprived areas compared with other areas (40.3% compared with 13.8%); and vandalism was experienced by 27.9% of households in deprived areas compared with only 6.6% in other districts. What is more, these problems are felt more heavily in predominately 'social' districts compared with predominately 'private'. Most noticeable is the incidence in social districts of anti-social behaviour (as discussed above) but also environmental degradation in the public and the private realm. Unkempt private gardens have a knock-on effect in making the public space seem less cared for.

These findings can also be directly related to income. There is an inverse relationship between income and the percentage of households in neighbourhoods suffering environmental problems. For example, in NRF priority districts with average incomes up to £6,500, 50.0% of dwellings suffered from litter/rubbish/dumping, whereas where income was £22,000 plus, the figure was 23.1% (ibid.). For almost every category of environmental problem measured by the English House Condition Survey in deprived and other districts, the percentage of white people suffering was less than for black and minority ethnic (BME) groups. Also, perhaps unsurprisingly, poor public space positively correlates with poor housing and hence poor health.

The precise nature of the relationships between income, deprivation and poor environmental conditions is difficult to ascertain. Does the poor public realm contribute to the degradations and increased poverty in the areas causing social and economic blight? Or are areas degraded because they are a low priority publicly and privately people cannot afford maintenance? Experts assert that that both are true simultaneously (Jenks 2001, personal correspondence). Furthermore, the 'broken window theory' (asserting that one broken window in an area will lead to more) has merit. Hence, the more run down a neighbourhood is, the less likely people are to respect it and the more likely they are to cause further damage. Understanding of this relationship may be sought from environmental psychology research, but there is strong evidence that deprivation in living conditions and the public realm is related to disproportionately high environmental degradation and deliberate damage. Conversely, there is early research evidence that access to outdoor play space may actually have a real psychological benefit on children (Satterthwaite, 2001, personal correspondence). Overall through, the links between health, development, education and the public realm have not been the subject of much empirical research.

On a more positive note, there is evidence that area improvements and environmental upgrades have a significant impact on public space use. Recent improvements in the city of Newcastle-upon-Tyne increased daytime pedestrian flow in the city centre and encouraged more community activities. Similarly, the drive by many cities in Britain to become 24-hour cities has countered their 'hollowing out' (Kreitzman 1999) since the late 1960s. Hence, the development of better urban planning policies, mixed use developments and a regulatory and policing regime that are beginning to encourage social activity in public space in the evening have had positive social and cultural impacts (ibid.). Birmingham has transformed its city centre by large-scale, long-term investment in urban design. It has created public space that has contributed to raising the city's image and attracting business and tourism. However, the town centre is quiet and sparsely populated in the evenings. Approximately 80,000 people work in Birmingham's city centre, but 80% live outside the city limits, and most do not use it for post-work leisure (Kreitzman 1999).

A good way of conceptualising the manifold relationships between space and social activities is to understand the nature of activities that take place in the public realm. Gehl (1996) suggests that there is a distinct relationship between the types of activity conducted in public space and the quality of that space. He classifies activities as:

Necessary activities which are essential to everyday living – such as going to work or the doctor or taking children to school. These activities have to take place regardless of the quality of public space.

Optional activities which are not wholly essential but desirable – such as walking the dog and reading in a park. These activities are maximised in good quality environments, but reduced dramatically in poor quality environments.

Social activities which involve interaction with other people in public spaces – such as playing football, chatting in the street, meeting friends to play in the park. They occur more frequently in good quality environments, due to the higher degree of optional activities taking place; however they are not totally diminished in poor environments due to the presence of people performing necessary activities.

Understanding the nature of the relationship between activity and the quality of space is important as it helps establish a framework for interpreting empirical observations of space in use. Gehl and Gemzøe (2001) have defined four different types of city wherein public space takes a different form. The 'traditional' city has the functions of a meeting place and a market place that co-exist with (but are not dominated by) traffic. In the 'invaded' city, the car and traffic usurp all other users and dominate public space in a negative way. The

'abandoned' city is the extreme where people abandon the public realm, and all functions of the city are dependent upon car usage. Optimistically however, the 'reconquered' city can occur by intervention in invaded and abandoned places to remove traffic, prevent reliance on the car and create attractive spaces for people to use.

It is clear from the literature on good practice and attitudinal research that public space should be socially inclusive. Swanwick *et al* (2001) have reviewed the literature in relation to green spaces in particular, and identify specific groups of users to take into account. **Children** primarily use green spaces for play, which has significant advantages for social development, understanding, creativity, confidence and interaction. A MORI household survey found that many people had either poor access or poor quality play provision in their neighbourhood (quoted in Swanwick *et al* 2001). Low investment, limited space, environmental dangers, litter, dog mess and poor maintenance are all cited as having negative impacts on children's play provision. **Disabled users** of green spaces have received little attention in the literature, although they represent between 8-14% of Britain's population. **Older people** have been identified as an under-represented group in parks (Comedia and Demos 1995), with younger users and their activities being cited as the main reason for not visiting. Evidence also suggests that older people tend to use parks at off-peak times (Swanwick *et al* 2001). **Ethnic minorities** are another group whose use of public space is under-researched, yet are significantly represented (5.6%) in British society. However, the existing small-scale research suggests that different ethnic groups have different patterns of behaviour. Loukaitou-Sideris (1995) studied four parks in Los Angeles, and found that Whites, Hispanics, African-Americans and Chinese had pronounced differences in their use of public space.

O'Brien *et al* (2000) examined children's interactions in urban space as part of an ESRC funded project, based upon child and parent school-based survey in neighbourhood clusters across London and Hatfield, supported by in-depth case studies. They found a decrease in independent use of public space for 10/11 year olds and marked differences by gender and ethnicity, girls and minority ethnic children being more restricted in their use of open space. Thus, there was a greater emphasis on home-based activity for children. By its nature, this has greater negative impact for children living in high-density inner city areas relative to those living in more spacious housing.

The relationship between public space and public transport

Public space is intrinsically linked with transport use and the way in which public space is served by transport has a significant effect on the quality, usability and viability of it. A 'good quality environment' depends on accessibility to it from a catchment area consistent with its size and purpose. The provision of this access however, should not detract from the quality of the environment. Jefferson (1995) provides evidence that in Europe, the tram or light rail vehicle is most harmonious with pedestrians, low noise and freedom from pollution (although overhead wires are often a visual intrusion). Where this is not possible, buses are a lower cost alternative, but they lack the depth of penetration into public space, i.e. tram lines can go right to the heart of civic spaces, while buses are largely restricted to existing road systems. Also, buses do not offer the same quality of service. Jefferson (1995) suggests that to provide this integration, pedestrian precincts can be constructed around existing stations (e.g. Cologne, Germany), or new stations or lines could be constructed to serve existing public spaces (e.g. Newcastle upon Tyne, UK). Thus, easy access to public transport systems that are regular, convenient, comfortable, noise free and pollution free make a significant contribution to a 'good local environment'.

However, as noted above it is important to acknowledge the negative impact of poor local environments on public transport use and walking and cycling. Research for Adshel (Neale *et al* 2000) found that people used buses and trains less because there were poor interchange environments and information was lacking. Empirical research has been conducted into transport and green spaces also. Llewelyn-Davies Planning and Environmental Trust Associates Limited (1992) found that the majority of people travelled to parks on foot (80%). Comedia and Demos (1995) found this to be 69% and work for the Royal Parks (Curson *et al* 1995) found that 41% of park visitors particularly valued parks for their convenient location and proximity. Travel to the Royal Parks was found to be influenced by: proximity of the parks to public transport routes; availability of parking; location of parks in relation to local business and residential areas; and the size of individual parks. Visitors coming by car tended to come less often but had longer stays. A majority of this type of visitor were women, perhaps reflecting the personal safety offered by the car. Larger parks attracted a higher percentage of car visits, drawing people from further afield. Few people used public transport, reflecting the greater inconvenience in doing so.

Access to public space in rural areas

The nature of rural areas may suggest that public space is plentiful. However, the literature suggests that restrictive access to farmland (especially in arable areas) and the low provision of service in many rural areas undermine this assertion. Smith and Barker (2001) have undertaken research exploring children's experiences of out-of-school childcare in England and Wales by interviews and observations of over 400 children and case

studies that reflected socio-economic differences. Their findings suggest that rural childhoods are increasingly characterised by **restricted spatial mobility**. Access to public space for children in the countryside is limited by: geographical isolation from other children; the privatisation of rural land; and fear from parents of children's unsupervised use of public space. The Rural White Paper (DETR 2000b) makes very little comment about such problems, however it does allocate funds through Regional Development Agencies to help restore high streets and provide better amenities, and advocates greater local community involvement.

Smith and Barker (2001) also report on the adoption of 'out-of-school care' for rural children that provides a safe, supervised and institutionalised environment for play and social interaction. While they accept that children who use the schemes are positive about them, they question that validity of the scheme as a substitute for unfettered access to public open space. They highlight the negative effects of segregation of children from adults and the increased time spent in institutional settings and segregation between those who can pay for such services and those who cannot.

The relationship between public space and economic issues (*in the context of social and environmental issues*)

Private and public sector developers are understandably concerned with the economic value of making improvements to the public realm. Recent research by CABE and DETR (2001) has addressed this question. In reviewing the literature relating to measuring the value of design, it found that successful public spaces might confer direct benefits (mainly economic) to those who invest in development, and indirect benefits (mainly social and environmental) to local communities and society as a whole. Indeed open space itself has recreational, psychological and ecological benefits by its very existence (Nicol and Blake 2000). However, a straightforward correlation between better public space and increased value (economic, social and environmental) does not exist. Better public spaces may increase value, but can in some instances increase costs to a greater degree. CABE and DETR (2001) highlight the potential value and costs of good urban design. This indicates a wide range of economic costs and benefits that can be measured in relation to those of social and environmental value.

If public space improvement is considered for its economic values to the exclusion of social and environmental values, there is a danger that the economic objectives will not be met. Loukaituo-Sideris and Banerjee (1998) suggested that in US commercial developments, economic viability of new public spaces was divorced from social benefits. This resulted in unconnected, socially exclusive and 'stage-set' public spaces. Thus, many groups did not perceive the space to be public and social exclusion in the public realm was reinforced.

Overall though, CABE and DETR (2001) found that good urban design adds value by increasing the economic viability of development and delivers social and environmental benefits. If we accept that a 'good local environment' is partly dependent on good urban design, then these results provide hard evidence for the relationships between economy, society and the environment in the realm of public space. The research findings relevant to public space are summarised thus.

- **Good urban design adds economic value by:** producing high returns on investment; producing local competitive advantages and raising prestige; responding to demands of local businesses; reducing management, maintenance energy and security costs; and providing benefits to local workers (productivity gains).
- **Good design adds social and environmental value by:** creating well connected, socially inclusive and accessible public spaces; providing mixed-use spaces with facilities and amenities for all; creating spaces that are sensitive to local contexts; enhancing safety and security within the public space and beyond; returning inaccessible and run-down areas to beneficial public use; boosting civic pride; creating more energy efficient, less polluting development; and revitalising urban heritage.

The research found that these benefits were increasingly recognised by stakeholders, including investors, developers, designers, occupiers, everyday users, society in general and local authorities.

In addition to this research, the DoE and ATCM (1997, 29) also reviewed business benefits from urban improvements. They found that there is sufficient empirical evidence to suggest that well planned, implemented and maintained urban space improvements can have a positive impact on the trading performance of most town centre occupiers, although the full effects may take 2-3 years to be realised. They also found that the cost of major town centre urban space enhancement schemes, including pedestrianisation, typically range from between £1 million to £10 million. In most cases the cost of urban space schemes will constitute less than 2% of the total annual turnover of retail businesses within the town centre. Therefore, modest improvements in trading performance will be sufficient to offset the costs of most schemes, without taking into account other benefits such as reduced crime and accidents, and increased private sector investment.

Hence, overall the message seems to be that good urban design is commercially viable, although the absolute costs of the improvements and the management of the scheme regulate this. Often urban design improvements are only viable for developers who also seek a management role in the space they are developing, as they can then offset higher development costs against higher rents.

The benefits of green spaces have been summarised in a literature review undertaken by Swanwick *et al* (2001). The following provides a summary of the findings of the economic benefits, alongside social and environmental.

Economic benefits include: attraction of inward investment (Council of Europe 1986); business retention; creation of employment opportunities; support for tourism (Rees 1999); and increases in value and marketability of residential and commercial property (in the USA research by the Trust for Public Land (1999) indicated that 48% would pay more for property located close to a green space or open space). Birkenhead Park, Merseyside and Central Park, New York are well known examples of public parks that have been catalysts for investment (Council of Europe 1986).

Social benefits include: contact with nature; opportunities for exercise; and involvement in social, cultural and community activities. All of these are beneficial to people's physical and mental health and encourage social interaction and education opportunities.

Environmental benefits include: improvement of urban air quality (broad-leaved woodland may reduce ambient air pollution by 17%); climate amelioration (reducing the negative climatic effects that close buildings and hard surfaces have on wind and heat anomalies in urban areas); habitat and biodiversity gains; water management (green spaces can act as sustainable urban drainage systems); and reduction in noise levels (although the evidence for this is highly inconclusive).

6. What means of designing, managing and improving public space have been shown to be effective?

The literature review has raised a number of complex problems. This section reviews some ways of designing, managing and improving public space that have been shown to be effective.

Design

As discussed above, the design of public space is a significant element in its usability and value. Recently, many good practice guides have been developed to educate professionals and the public on what constitutes good open space design. Some of this has concentrated on residential areas (DTLR and CABE 2001), some on town centres (DTLR and ATCM 1997) and some on green space (Comedia and Demos 1995). The Urban White Paper (DETR 2000c) also highlights what is currently seen as good design, and the Urban Task Force report that precedes it gives good practice examples from Europe and the UK. These guidance documents all make reference to a common set of design principles that have stemmed in the main from *Responsive Environments* (Bentley *et al* 1985). Overall, evidence suggests that places that are well integrated, legible, viable, robust (i.e. flexible) and respectful of local identity will be most successful. All the above guidance advocates allowing some transport through-movement but designing for safe speeds. These general urban design principles have been refined to develop certain types of urban form. One example of this is 'home zones'.

Home zones are discrete areas (a single street or an area of connected streets) where pedestrians are given priority over traffic, although cars are not excluded. This is achieved by landscaping techniques such as removal of kerbs and the use of street furniture to calm traffic and define parking spaces. The objective is to create a safer outdoor environment for residents, and improve the environmental quality of the area (Ferguson 2000). The Children's Play Council launched its *Home Zone Initiative* in 1998 following an earlier report (Children's Play Council 1997). Subsequently, the DETR began monitoring nine projects throughout the UK, and were interested to study the influence of home zones on street activity, fear of strangers, scope for social contact, house prices, use of public transport and use of the zones by particular social group, especially children and the elderly (Biddulph 2000). In 2001, the Prime Minister announced a programme to accelerate growth of home zones, establishing a £30m challenge fund (DTLR 2001a).

Home zones are not a new concept in Britain and have existed in some form since 1969 (Biddulph 2000). While there is little evidence about the success of older schemes (in Britain), there is evidence that accidents have been reduced (although this trend is a general one), and negatively, that there have been parking difficulties, access difficulties by emergency services, maintenance problems, environmental stress from increasing car ownership and changing tenure patterns (Biddulph 2000). Home zones are more common in Europe, particularly the Netherlands (known as *woonerf*), Denmark and Germany (Jones 2000; Biddulph 2000). Here they have become

a popular urban layout type, and are an antidote to the unconnected, residential suburban developments common in so much of the UK.

Other examples of specific initiatives have been developed by the Countryside Agency. These aim to improve the quality and quantity of public space for those living in the countryside. *Millennium Greens* is a programme to enable local communities to design and develop public open spaces. The scheme is managed by the Countryside Agency and is funded by public and private concerns (Curry 2000; Countryside Agency 2001a). *Doorstep Greens* is a similar programme that will provide grants to 200 local communities who experience disadvantage or where regeneration of the local environment is needed. These schemes operate on the principle of community involvement at all stages of the process (Countryside Agency 2001b). On a larger scale the Millennium Villages Initiative is in its early stages but may offer examples of good practice in public realm design in the future (DETR 2000d).

Management

A number of innovative approaches to public space management have been developed in the last decade. These include largely community driven approaches such as the use of neighbourhood and street wardens, and local or national government approaches such as Town Centre Management, the use of CCTV, and town centre strategies. Although there is much literature on how to set up these schemes and implement them, there is little objective monitoring of their success.

This said, the impact of street wardens and neighbourhood watch has been documented (Collier 1995; Social Exclusion Unit 2001, *PAT6*). The DTLR Neighbourhood Renewal Unit has reported on street warden schemes in the US, where safety and cleanliness in the public realm is regarded as important for quality of life and synergistic with crime and the fear of crime (Neighbourhood Renewal Unit 2001). At police consultative meetings, complaints about dog fouling and quality of life issues are further up the agenda than crime, even in higher crime areas. In the warden system a 'safe team' patrols and polices, and a 'clean team' is responsible for the cleaning itself. The results have been that over time people perceive the environment as safer, the quality of life of residents and users of places is improved and visitors and investors may also have been encouraged (*ibid.*)

Another example of good management has been the policy in the UK and Continental Europe of the 24-hour city. Cities such as Copenhagen and Brighton have examples of successful public spaces that operate day and night. Their integrated squares, cafés and streets are regularly alive with people sitting, walking and watching. Since the mid-1980s some cities have relaxed regulations. Brighton has more restaurants and cafés per capita than any city in the UK except London and its council cites their outdoor nature as giving the city a continental feel (Kreitzman 1999). 'Chester Alfresco' is the policy that its council has adopted to promote outdoor cafés. Montgomery (1997) argues that the licensing of public entertainment and the enforcement of liquor licences and strict opening times have undermined social life in cities in the past. But now many local authorities are acting to increase social interactions in public space and improve quality of life. Architect Richard Rogers has extolled the virtues of social activities in public space as being the essence of city living (Rogers 1997).

A further well-documented management technique is the use of CCTV or surveillance cameras. These are as commonplace in many public spaces as the telephone box. The control by surveillance that has, in the past, been associated with private commercial shopping malls, has now migrated to the public realm. Because of the 'commodification' of public space (whereby the public space itself has become a 'private' and economic asset), the ability to maintain security has been bound to property values and profits (Christopherson 1994, *cited in* Fyfe and Bannister 1998). These 'commodified' public spaces do this to compete, on the basis of security, with privately managed shopping malls. CCTV has become a common strategic response to anxieties about crime from consumers of public space and from businesses (Fyfe and Bannister 1998).

While Britain has more CCTV systems in public spaces than any other advanced capitalist nation, there is variable evidence of their effects on recorded crime (Fyfe and Bannister 1998, 257). Indeed, when Phillips (undated) reviewed CCTV evaluation research, she found that, "CCTV can be effective in deterring property crime, but the findings are more mixed in relation to personal crime, public order offences, and fear of crime". A recently completed systematic review of CCTV for the Crime Reduction Unit found that overall it reduces crime to a small degree, but that its effectiveness varies according to context (Webb, 2001, personal correspondence). It found that CCTV can be most effective in reducing crime in car parks, but these schemes often involve other initiatives such as lighting. Further research is now underway to examine issues such as cost effectiveness, impact of CCTV in residential areas and the precise conditions in which CCTV is most likely to work.

Despite this evidence, CCTV is generally perceived as a proven crime reduction and prevention technology. It has become the 'eyes on the street' according to Fyfe and Bannister (1998) who ironically coin the phrase from Jane Jacobs' seminal work, *The Death and Life of Great American Cities* (Jacobs 1961). She used the phrase as

part of her vision of mixed-use city centres that generate street activity by people who provide the 'eyes on the street' to ensure the safety of residents and visitors.

The proliferation of CCTV has occurred in Britain with little protest on the grounds of civil liberties. The Scottish Council for Civil Liberties (1995) has stated that while they are, "in principle opposed to people being spied on in public places ... it can help prevent and detect crime in certain clearly defined circumstances". In fact, such interest groups have concentrated on the regulation of CCTV usage, hence the proliferation of signs indicating that: 'For your safety CCTV cameras are in operation' or similar.

Also, evidence suggests that CCTV is having greatest impact on minor crime but may be contributing to social exclusion. For example, in Newcastle city centre, between 1993 and 1995 a quarter of the incidents for which CCTV was used involved begging, vagrants and 'suspicious youths'; and in Birmingham 17% of incidents involved nuisance, drunks and begging (Fyfe and Bannister 1998, 262). The inherent danger here is that public space, regulated by CCTV systems, will act to exclude those who are not considered valid consumers (Graham *et al* 1996). Where commercial imperatives define acceptable behaviour in public space, subtle privatisation of public space occurs. Public space then becomes a place that serves retail and business interests, perhaps to the exclusion of other uses and users.

Tiesdell and Oc (1998) suggest that making public space safer (or making it feel safer) is a necessary precondition for its revitalisation. They argue that concerns for city centre safety have led to planning and urban design responses that impinge upon the ideals of public space that can make it repressive, oppressive, socially divisive and exclusive. These approaches are characterised by privatisation and segregation in the public realm (the 'fortress' city) and explicit policing and CCTV (the 'panoptic' city). They suggest alternative positive strategies for safer city centres such as creating more heavily 'peopled' spaces (animation) and management of the public realm in a manner that is less visually explicit and more consensual than in the 'panoptic' city. Such notions are expounded by Cummings (1999) who considered the successes of fortress and panoptic type approaches to policing of urban areas in Glasgow. The ideal of the compact city (Jenks *et al* 1996; Williams *et al* 2000; Rogers 1999) is considered a benefit for safer cities because of the proximity and quantity of people that give rise to 'natural policing'. There is evidence that restrictive approaches to safety in public space have negative impacts. Waiton (2001) examines the impact of the strict curfew measures taken in Hamilton, Scotland. While the curfew's objectives were to promote safety and reduce crime in the public realm, it acted to increase adults' fear of young people, reduce the amount of time for young children to play, raised levels of insecurity and led to reduced contact between young and old in the community.

A further relatively well documented management technique is that of 'park strategies'. An assessment study undertaken by the Urban Parks Forum (2001) disclosed that only 15% of local authorities have a dedicated park strategy, 29% have a park strategy incorporated in a much wider strategy. Significantly, 56% of local authorities do not at present have any form of park strategy and of these 64% do not have any plans to introduce a strategy within the next 12 months. The study does not show that existence of management strategies necessarily has a positive impact on the condition of parks, but one clear observation from the analysis of the findings is that park authorities that operate a strategy incorporated within a wider public realm strategy are by far the most successful at ensuring that good park stocks continue to improve. Whilst there are publications, such as Greenhalgh and Warpole (1996), Welch (1995) and LGA (2001), which provide guidance and information on managing public open space, there has been no comprehensive research to pinpoint those elements in management strategies which are most likely to consistently deliver good results under constrained budgets.

A further initiative is 'Greening the City', introduced by the government in 1995 to advocate green areas in towns and cities. A good practice guide emerged (DoE 1996b) that explored the benefits that greening of urban development could provide, in addition to visual improvements. The guide claimed that long-term social, economic improvements would be generated, thus:

- Benefits to inward investment and business retention by improving the image of places, providing a positive environmental image for businesses and encouraging tourism;
- Benefits of pollution control, enhanced biodiversity and contribution to sustainable development; and
- Improvement to the quality of life for those living, working and visiting places, promoting healthier lifestyles and community development.

The guide also offers recommendations to build on and extend good practice. This could be achieved by encouraging local authorities to incorporate greening strategies into the statutory planning process; persuading business interests of the economic advantages of integrating greening strategies in their activities; including the public and voluntary sector in the greening process, both for their local expertise and to develop knowledge and good practice; and demonstrating and promoting the potential benefits (economic, social and environmental) of greening strategies (DoE 1996b, iv).

The above-mentioned schemes are given as examples of relatively well documented initiatives. However, many more exist that have not been monitored or documented, and these require further attention.

Improvements

Many problems associated with the public realm relate to its deterioration and poor environmental conditions. Certain types of space are more likely to require improvements than others. Hence improvements schemes are usually concentrated in poorer housing estates, or city centres, or parks and green spaces. As for management, local communities or local or national government can lead schemes. Again, the bulk of the literature concentrates on setting up improvement schemes and there is less reflective work.

Good practice in the management of public space is beginning to embody Best Value principles. Best Value came into effect on 01 April 2001 and aims to deliver service provision that combines value, quality and efficiency, and encouragement of healthy partnerships between public and private sector bodies. It should mean better quality services at a reasonable cost, and give local people a greater say. Local authorities must achieve Best Value, which begins with the four 'C's' – challenge, compare, consult and compete.

In order to judge what constitutes a good site, McAnespie (1999) has studied benchmarking and performance indicators for Best Value in parks and open spaces. This research identified ten factors of most concern to visitors, namely: design, accessibility, signage and interpretation, health and safety, security, facilities, maintenance, usage, usability and on-site marketing. These criteria provide a succinct tool for designing, managing and improving public open space. Similarly, the *Green Flag Park Awards* scheme is designed to recognise and encourage good quality parks, and also provides a full list of benchmarks (Greenhalgh and Newton 1999) against which quality can be measured. Recently, 81 awards have been made for 2001 (DTLR 2001e). These emphasise community involvement and environmental matters. Also, the ILAM Open Space Management Award, designed to recognise improvements in parks, aims “to recognise the most innovative management scheme undertaken to enhance the use of a single, publicly accessible park or open space” (Baggott and Roper 2001). Its criteria include: local community involvement; the extent of partnerships formed; funding sources used; long-term goals and management; and areas of innovation that are apparent. Baggott and Roper (2001) also present case studies of previous winners.

Another important government initiative is the Beacon Council Scheme, which forms part of the Modernising Local Government programme and works alongside Best Value. Launched in 1999, it has been successful in recognising excellence and encouraging the spread of good practice (Advisory Panel on Beacon Councils 2001). It aims to raise standards in local government by identify innovative council activities and helping them to promote their good practice to others. Local Authorities are assessed on a series of themes, many of which in Rounds 1, 2 and 3 have had a direct and indirect bearing on public space (e.g. maintaining a quality environment, improving urban green spaces). Consultation for Round 4 includes the themes of anti-social behaviour, promoting healthy communities and reducing the impact of street works (ibid.).

Strategic planning

Planning advice for public open space at the national level comes primarily from Planning Policy Guidance Notes (PPGs). This advice is covered in several PPGs, and there is no specific PPG for public open space. However, there have been arguments made for a PPG solely dedicated to parks and open space. The report *Park Life* (Comedia and Demos 1995) argues that such a PPG would “provide a framework for the protection, creation and disposal of open space, that recognises questions of quality, value and diversity, and sets urban parks within the wider context of creating liveable cities that put people’s needs first”. PPG17 - Sport and Recreation (DoE and Welsh Office 1991) is currently of most relevance to parks, play areas and green spaces. There is now a new consultation draft of PPG17 that has amended its title to ‘Sport, Open Space and Recreation’ (DETR 2001). However its definition is rather loose, it neglects proper coverage of urban parks, play areas and green spaces and is still focused heavily on sport and recreation (Swanwick *et al* 2001).

The Urban Task Force (1999) called for emphasis of a more strategic approach to public spaces. It highlighted the deficiencies of SLOAP (space left over after planning) and advocated concepts such as ‘centre to edge’ networks and ‘inner rings’ of public space. It encouraged local authorities to develop strategies for the whole public realm and develop a clear hierarchy of public space. It also advocates a national programme to create comprehensive green pedestrian routes in towns and cities.

At the local level, development plans (particularly Local Plans and Unitary Plans) interpret PPGs and provide strategic planning frameworks. Research by the Urban Parks Forum (2001) indicated that 15% of responding local authorities had a dedicated parks strategy, 29% had a strategy that is within a wider strategy and 82% planned to have a strategy within 12 months. Bell (1995) also examined the planning system, management and funding, nature conservation and education and community value of open space in London. She cited examples

of good practice and recommended to central government that planning guidance should acknowledge the range of roles played by open space and its importance for sustainable development, and that the real costs of provision and maintenance were often overlooked.

Regeneration and public space

Neighbourhood regeneration is a major aspect of government policy and has the potential for much improvement in the public realm. The recently published national strategy plan for neighbourhood renewal (Social Exclusion Unit 2001) sets out the government's vision for narrowing the gap between deprived neighbourhoods and the rest of the country. As notes above, the literature suggests that public space provision and quality is worse in deprived neighbourhoods. A survey of people in seven areas receiving Single Regeneration Budget funding indicated that only half thought their area was suitable for raising children, compared with four fifths nationally (Social Exclusion Unit 2001). A range of financial and support measures will facilitate this strategy, including the Community Empowerment Fund, Neighbourhood Renewal Community Chests, Neighbourhood Renewal Fund, New Deal for Communities and other initiatives such as Sure Start. Of note is the work of 18 cross cutting Policy Action Teams (PATs) grouped under five headings including 'Getting the Place to Work' and 'A Future for Young People'. Of the PATs, several have relevance for public space. **PAT 4 Neighbourhood Management** advocates a 'neighbourhood manager' who monitors service quality and work with local communities and key agencies to resolve problems. Similarly, **PAT 6 Neighbourhood Wardens** advocates the role of warden patrols to reduce the fear of crime and crime itself. **PAT 8 Anti-social Behaviour** examines the effects this has upon neighbourhoods. **PAT 9 Community Self-help** examines which measures of generating community commitment in poor neighbourhoods are successful. **PAT 12 Young People** aims to identify what is required to empower and support disaffected young people in poor neighbourhoods. While these management and improvement initiatives may not relate directly to public space and, in part, are some way from implementation, they have the potential to reap benefits.

As the literature review revealed, there is emerging evidence that regeneration schemes can be successful in terms of improving the image of areas and attracting private investment. Also, they have been shown to have positive effect on the health and well-being of the local residents. However, no research to date has attempted to pinpoint exactly what aspects of regeneration (whether social or physical) may be responsible for benefits. Some research attempting to do this is ongoing by Burton *et al* (forthcoming). An additional source of 'good practice' in urban renewal is the work of *Groundwork*. It has advocated that the environment can be a powerful stimulus for neighbourhood regeneration. The local environmental regeneration projects that it undertakes have the potential for improving and empowering local communities, fostering social inclusion, developing local skills, reducing the alienation of young people and preventing crime, stimulating local economies and jobs and demonstrating successful partnerships between local community groups and public and private agencies (Groundwork 2001).

The importance of stakeholders in public space improvements

Community involvement in the provision, design and management of public space has become increasingly apparent. With the introduction of Local Agenda 21 and Best Value, the role of local authorities has altered, from service providers to service provision collaborators, ensuring that local needs are met and that local opinion is sought and acted upon. JURUE (1987) studied good practice in urban regeneration and identified good practice in encouraging community involvement in public projects. This includes public discussion forums and seeking private sector support for projects. In *Greening the City* (DoE 1996b), partnerships with local communities and the private sector are considered to be fundamental to urban greening. This includes: involvement of communities with all aspects of planning, design, implementation and management; involvement of a community development professional within project teams; and consideration of local character. However, the literature also highlights the pitfalls of stakeholder involvement. The DoE (1996b) recognises that professionals may be unwilling to undertake full consultation with 'non-professionals' and not take seriously the views of local communities. Also, such partnerships may incur extra costs, slow down the development process and raise and create expectations that cannot be met.

7. Subjects for further research

In undertaking the literature review, part of the remit was to identify where significant gaps lie in empirical evidence on any of the questions posed. In summary, the most significant areas in need of further work are:

- Appropriate levels of traffic for different types of local environment
- The impact of business activity on local environments

- The impact of the fragmentation of responsibility in local authorities on the public realm
- The impact of non-enforcement of the law on the quality of the public realm.
- The impact of recent management and investment trends on the public realm.
- A full review and assessment of interventions in local environments: from improvement schemes to design changes town centre management.
- A review of local authority practices and policies for management of public space.

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