

Making the Links

The importance of Cleaner, Greener Places

This is our Home:
Evidence Paper
Two
(Of Four Papers)

March 2010



About Keep Britain Tidy

Keep Britain Tidy is an environmental charity working to achieve cleaner, greener places for everyone. We campaign in England against litter and neglect, providing advice and leading others by inspiring practical action and better policy. With our origins in the 1950s anti-litter campaigns, we now focus on the range of issues affecting where people live including fly-tipping, fly-posting, graffiti, antisocial behaviour and abandoned vehicles. We run programmes such as Eco-Schools, Blue Flag and Quality Coast Awards for beaches, and the Green Flag for parks to demonstrate practical action. We are part funded through Government and other income is secured through training, consultancy and sponsorship. For more information on how you can make a change visit www.keepbritaintidy.org.

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Keep Britain Tidy would like to thank all of its stakeholders and staff for their input into this document over the last year through the Keep Britain Tidy Network, manifesto conversation events and All Party Parliamentary Group. Particular thanks go to those people who acted as external reviewers for this series of evidence papers.

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Introduction

This paper is the first of a set of four evidence papers which support Keep Britain Tidy's document *This is our home – A manifesto for a cleaner England*. The evidence papers may be read in isolation or as a series of supporting evidence papers which provides the evidence base for the challenges and key principles for delivering change. They can all be found at www.keepbritaintidy.org/ourhome.

Each paper includes recommendations drawn from the evidence base which support the delivery of the headline challenges outlined in *This is our home*. In order to allow the reader to understand the full range of recommendations, whether they read one or all four evidence papers, the full list of recommendations is included following the executive summary of each evidence paper.

The approach adopted in undertaking the manifesto research utilised the principles of Rapid Evidence Assessment (Butler *et al*, 2009). A primary literature review of both hard and electronic materials was undertaken and utilising a snowball approach this led the research team to secondary materials cited in the primary literature. The key themes from the manifesto were subsequently developed on the outcomes of this literature review in tandem with the output of a special plenary at the 2009 Cleaner, Safer, Greener Conference in Brighton which asked delegates to discuss their key issues regarding local environmental quality. The key themes were then tested with key stakeholders identified at the outset of the project from the public, private and third sector through a variety of stakeholder events including three *manifesto conversation* seminars and internal Keep Britain Tidy seminars.

Executive Summary

This paper highlights the cross-cutting links between local environmental quality and other policy agendas from health to climate change.

The National Health Service is facing some of the biggest challenges in its history as a result of societal and demographic changes and clean, safe green infrastructure has a vital role in ensuring the mental and physical health of the nation. Numerous studies demonstrate the links between clean, green areas and improved health outcomes ranging from reduced obesity levels to reducing depression. Levels of social justice and poor local environmental quality are intrinsically linked. Studies reveal those living in the most deprived areas also live in the worst areas for local environmental quality. Innovative research is highlighting the factors leading to these results and offers potential solutions for delivering equitable service provision.

The link between local environmental quality and antisocial behaviour has long been known ever since the concept of the broken windows theory emerged. Contemporary research, however, reveals the links between satisfaction with place, perceptions of antisocial behaviour and the role of place making and good design in reducing antisocial behaviour. In this it has moved away from attempts to increase fortification of parks and streets. Good design is vital to ensure the creation of excellent public spaces but also to ensure those spaces remain of a high standard during their lifetime through due consideration of their long term durability and maintainability with regards to cleansing.

The mass transfer of housing stock away from local authorities has created a new generation of land managers who have a primary duty to deliver good quality housing but also to ensure that such housing is located in places with good local environmental quality. Significant skills and organisational challenges in this sector remain if this is to become a standard reality.

Local environmental quality impacts on local economies through, for example, increasing property prices through the proximity of clean and safe parks, supporting high streets and providing real value of green infrastructure to local people.

The climate change agenda has only just started to impact on the local environmental management sector through government policies such as the Carbon

Reduction Commitment and evidence is thin, but the launch of the first emission-free fuel cell driven compact sweeper in Switzerland highlights the beginnings of a carbon revolution in the sector.

Recommendations

Evidence Paper One: Where Are We Now? A Reflection on Sixty Years of Keeping England Tidy

Recommendation 1: Government should review the legislative framework surrounding litter in aquatic environments.

Recommendation 2: Government should review the legislative framework surrounding littering from vehicles and the potential for introducing a penalty point on driving licences for littering offences.

Recommendation 3: Keep Britain Tidy should review worldwide best practice to identify alternative survey methods to provide comparative data on absolute litter levels in order to compare litter levels in England with other countries.

Recommendation 4: Keep Britain Tidy to review worldwide best practice to identify the proportion of unintentional and deliberate littering in England.

Evidence Paper Two: Making the Links – The Importance of Cleaner, Greener Places

Recommendation 5: Research should be conducted to determine the relationship between local environmental quality and health impacts.

Recommendation 6: A gold standard award should be developed for the best managed places following the recommendations of *World Class Places*.

Recommendation 7: Statutory litter appraisals should be introduced for significant development projects.

Recommendation 8: Drive up standards of local environmental management by housing providers, if necessary through legislation.

Recommendation 9: The coalescing of National Indicators around a Quality of Place framework should be considered by Government as proposed in *Word Class Places*.

Evidence Paper Three: Delivering Improved Local Environmental Quality

Recommendation 10: Local authorities, Primary Care Trusts and schools should work together to implement clean school routes in order to encourage walking and reduce littering behaviour by school children.

Recommendation 11: Long term evaluations of environmental education programmes are required in order to empirically assess their long term impact on pro environmental behaviours (particularly around littering).

Recommendation 12: Further research is required to better understand the effectiveness of longer term campaigns on the public's values, norms and behaviours regarding littering.

Recommendation 13: Further research is required to understand the role of bin design and location on usage levels by the public to improve their effectiveness.

Recommendation 14: That Government commissions further research into the potential effectiveness of PET refillables with a long term view of introducing a deposit scheme for this and other materials that aids reductions in litter.

Recommendation 15: Commission research to determine the correlation between enforcement and litter reduction and the effectiveness of the fixed penalty notice system on deterring littering behaviour.

Recommendation 16: Further research into the media's reaction to using enforcement as a deterrent against littering and any consequential links to the public's reaction and behaviour.

Recommendation 17: Ensure local authorities have confidence in the court system by ensuring Magistrates understand the full implications of crimes relating to the public realm when hearing cases and sentencing offenders.

Evidence Paper Four: Taking the Lead – Inspiring Cleaner, Greener Places

Recommendation 18: Keep Britain Tidy will investigate the viability of an institute of local environmental quality officers with other relevant professional institutes and training organisations in order to improve skills in the local environmental quality sector.

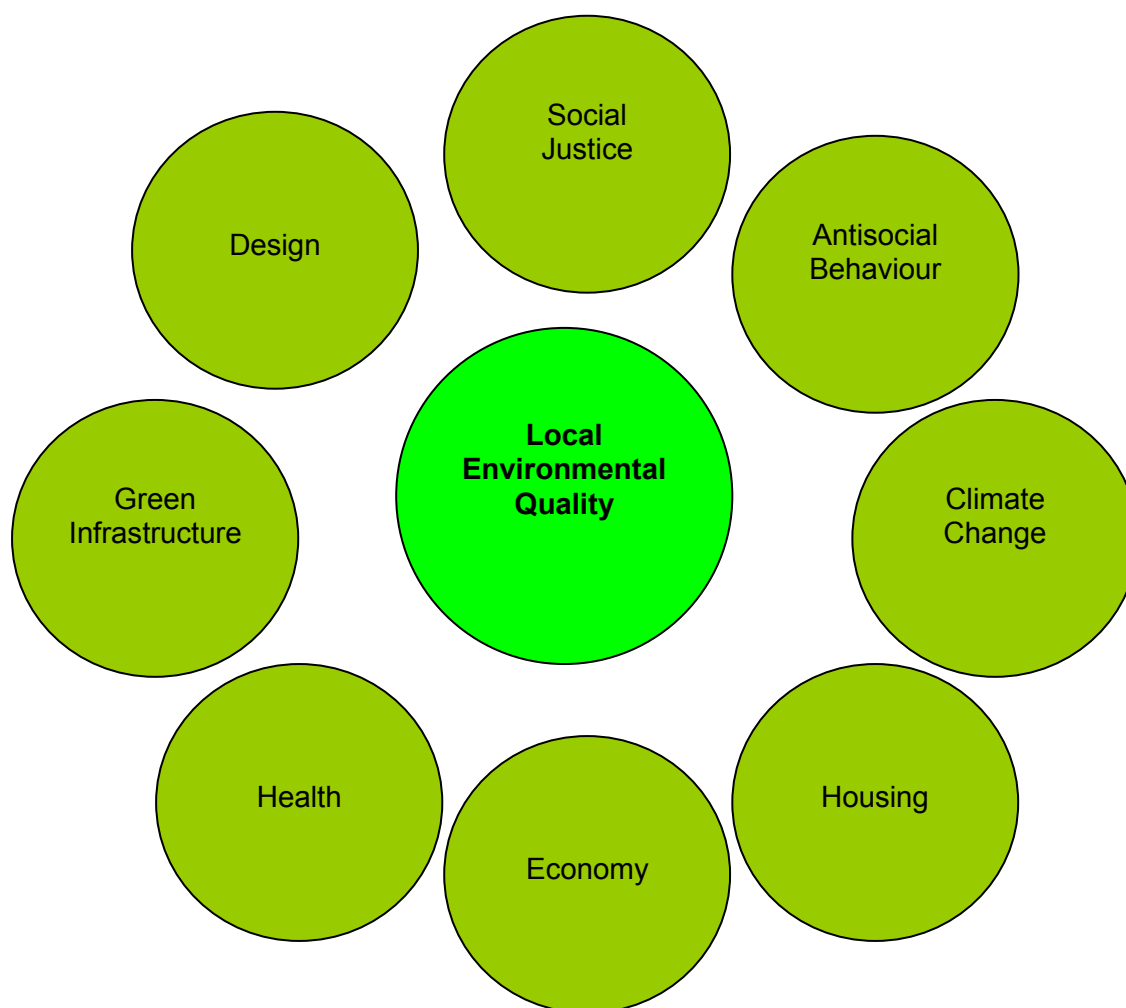
Recommendation 19: Keep Britain Tidy and other environmental organisations to work together to support the establishment of a network of Green Academies in England to deliver the next generation of environmental professionals.

Making the links

This is our home calls for a cross-cutting approach to tackling local environmental quality¹ issues through a number of different agendas (see Figure 1) and current research highlights that such mutual benefits already exist. CABE Space (2004a) emphasises these cross-cutting links in the importance of high-quality spaces in helping to reduce crime and fear of crime, having a positive impact upon physical and mental health, creating economic value and encouraging social interaction and movement in and between places.

¹ We define local environmental quality as being the physical condition of the local environment to which the public has access or which they can see, whether publicly or privately owned – relating to general appearance as well as the management and maintenance standards which are evident.

Figure 1: Cross-cutting agendas and local environmental quality



The New Local Government Network (2009) comments that delivery of streetscene services is politically important because high-quality streetscene services and subsequent high-quality local environment can support the achievement of wider social, economic and civic objectives.

Green Infrastructure, Local Environments and Health

The role of green infrastructure

Green infrastructure is recognised as providing the environmental foundation that underpins the function, health and character of communities (CABE, 2009). Evidence suggests that interventions in the physical environment, that is to say the presence of green space, are highly effective at affecting health and health behaviours. Environmental interventions have, for example, been shown to be more successful in

affecting rates of physical activity than those based on information or media campaigns (Mitchell and Popham, 2008).

The challenges facing the health service continue to change in the face of societal changes and recent research suggests that by 2050 nine out of 10 adults will either be obese or overweight, whilst almost four million people will have diabetes by 2025 (Natural England, 2009). Current evidence suggests that 20% of four year olds are overweight and 15% of 15 year olds are obese (CABE Space, 2004a) and that within 10-15 years obesity will overtake smoking at Britain's biggest killer if current trends persist (Pretty *et al*, 2003). In England, obesity and physical inactivity costs the country £2.5bn and £8.2bn respectively (Natural England, 2009). This figure looks set to rise with mental health costing the country £76bn per annum (10% of GDP) by 2026 in health and social care and the wider economy (Basher, 2010). However, the striking projections of poor health and high costs are not necessarily insurmountable as it is estimated that if just one in 100 inactive people took adequate exercise it could save the NHS in Scotland as much as £85m per year (Bird, 2003).

We can see from research that the ability to undertake exercise in order to tackle these conditions will be vital to reduce people's societal, emotional and financial impact on the country as a whole. It is in this respect that the delivery of a cleaner England is vital in order to ensure everyone in England has access to clean and safe areas to undertake exercise.

The green infrastructure and health agenda has close links with the importance of local environments as health improvements cannot be fully realised if local environments are littered, suffer from graffiti and have dog fouling on the streets. Research shows that people will not frequent places that are littered and not cared for, therefore it is vital that these issues are tackled to ensure that the £110bn being spent on health per year has maximum effect (Natural England, 2009).

Profound demographic changes will place increasing importance on the accessibility of local services and how easy it is for older people to move around their neighbourhoods (CABE 2009a). Furthermore, it is noted that health complications increase with age and opportunities for daily exercise and interaction with the community is linked to accessibility around neighbourhoods and to local services. This, in turn, is contingent on the design and quality of the built and open environment (CABE 2009a). Older people already make up the fastest growing group

of the UK population. In 2007, 9.8m people were aged over 65 and by 2032 this figure is set to rise to 16.1 million – almost one on four of the population; whilst the numbers of those 85 and over will more than double (Office for National Statistics, 2008).

Prevention

Natural England argues in its *Our Natural Health Service* that health professionals should use parks and green spaces in order to prevent diseases rather than treating their systems (Natural England, 2009). Specifically, Natural England believes that every GP or nurse should be in a position to signpost patients to approved health walks or outdoor activity in order to reduce or prevent the impact of diseases (Natural England, 2009). The National Institute of Health and Clinical Excellence (NICE) has also encouraged prescriptions of outdoor activity sessions (2008) and recommends incorporating green spaces into area cycling, walking infrastructures and promoting maintained, safe, green spaces to encourage physical activity. This policy approach is supported by the public and 88% of the public believe walking is the most attractive form of exercise (Natural England, 2009).

Walking schemes, such as Natural England's 'Walking the way to health', have the potential to deliver significant financial savings to the National Health Service of £81m (Natural England, 2009). Natural England is working with the Department of Health through a £12m investment programme to encourage 200,000 extra walkers over the next three years (Natural England, 2009). The importance of walking in improving both physical and mental health has been demonstrated through a number of research projects (Department of Health, 2004; Hakim *et al*, 1999; The Diabetes Prevention Research Group, 2002; Slattery *et al*, 1997; Grisso *et al*, 1991). There is also a need for more access to green spaces and national and local health policy to recognise the role of parks and green space in delivering health benefits (Natural England, 2009; CABI Space, 2004b).

The use of local environments to deliver health improvements is predicated on the availability of clean and safe environments to exercise in. The long-term links between green infrastructure, local environments and health will become increasingly understood over time thanks in part to the establishment of a research programme at Peninsula Medical School to investigate the links between human health and the environment (Natural England, 2009).

Health impacts of clean, green places

The impact of poor local environmental quality and poor access to green infrastructure on health outcomes

Areas of higher deprivation suffer more severely from the collective ailments that define poor local environmental quality – litter; graffiti; fly-tipped waste and general grime. In 2004, 20% of the lowest income group lived in poor quality environments (Office of National Statistics, 2007). Neighbourhood conditions create serious disadvantages in people's lives and there is evidence of complex interactions leading to a serious gap in opportunities for people living in poor areas. Environmental conditions can give strong signals of problems, and fear generates withdrawal from streets and public spaces, particularly by families and the elderly (Marmot Review, 2010).

Health inequalities exist. Life expectancy is rising, both in affluent and disadvantaged areas, but the average length of life continues to be shorter in many disadvantaged areas (Department of Health, 2005). People with low socioeconomic status are less likely to exercise than those with high socioeconomic status, partly because the environments in which they live are less conducive to it (Mitchell and Popham, 2008). Deprived populations are less likely to have access to green spaces, although socioeconomic position itself does not independently affect use of green space if it is available (Grahn and Stigsdotter, 2003).

A literature review of the effects of place on social inequalities of health found that location can have a long-term effect on health, resulting in obesity, respiratory illness, coronary heart disease or mental disorders. Graffiti, litter, a lack of social cohesion, a history of violence and many fast food restaurants in a neighborhood are all characteristics that can lead to negative health outcomes for its residents (Bernard, 2007).

The environmental quality and perceived safety of an area has been shown to influence levels of activity in the local population – the higher the perceived level of crime and the more litter and graffiti an area has, the lower the level of physical activity (Sustainable Development Commission, 2008). High levels of graffiti and litter increases the likelihood of being less physically active and being overweight or obese (Ellaway *et al*, 2005). Poor quality local environments also have wider impacts on

public health. Fear of crime and poor maintenance can stop the use of children's play areas (Department of Health, 2005). The overwhelming influence for 99% of the overweight or obese population is environmental (International Obesity TaskForce and European Association for the Study of Obesity, 2002) – comprising non-genetic factors that relate to how we live our lives, such as passive over-consumption of energy and restricted opportunities for physical activity. Furthermore, evidence shows that adult patterns of exercise are set early in life. Inactivity breeds inactivity so a lack of exercise during the early years can create problems such as diabetes and heart disease in later life (Kuh and Cooper, 1982).

Between one in four and one in two people will experience a mental health issue at some point in their life (New Horizons, 2009). There is a multiple impact upon society from poor mental health including increased antisocial behaviour and crime and the main factors contributing to poor mental health include a poor environment (New Horizons, 2009). People with fewer social networks and emotional support may be more likely to be obese, experience less wellbeing and more mental health problems (Wilkins and Marmot, 2003).

Healthy neighbourhoods can reduce social exclusion by being attractive places to inhabit, promoting interaction through social networks and exercise. Furthermore, wellbeing is enhanced by conditions that include: good health and a healthy and attractive environment (Sustainable Development Commission, 2008).

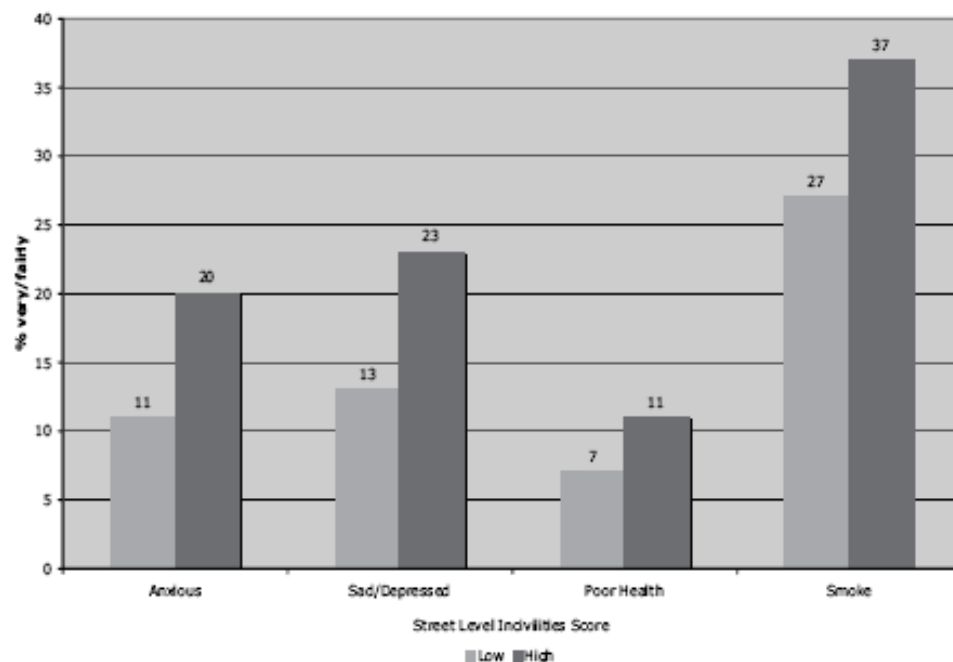
The influence of improved local environmental quality on health outcomes

Research undertaken by Bristol University suggests that those who live closer to green infrastructure are less likely to be overweight or obese. However, those who lived further away from green infrastructure were 27% more likely to be obese than those living closest when controlled for income and social status (Coombs *et al*, in Press). An American study discovered that increased proximity to green infrastructure led to reduced teenage weight gain by 5kg over two years (Bell *et al*, 2008). In Glasgow, a study was controlled for social groups and economic status. This revealed that people who live closer to green infrastructure had lower death rates and incidences of heart disease (Mitchell and Popham, 2008). Furthermore, where the availability of green infrastructure was low, 1,300 extra deaths occurred in lower income groups (Mitchell and Popham, 2008). Higher levels of greenery and lower levels of graffiti and litter in residential environments are associated with being physically active and not being overweight or obese (Ellaway *et al*, 2005). People are

more active if they live within an attractive natural environment, whether through activities such as gardening, jogging, cycling, family outings to a park, or simply going for a walk (Department of Health, 2004).

Curtie *et al* (2005) reports a correlation between those people who reported that they experience high levels of street incivilities² or absence of environmental goods³ and increased levels of anxiety, depression, poor health and smoking. 23% of those people reporting a high incidence of street level incivilities also said that they feel depressed or sad very/fairly often. This compares to 13% of those who experience low levels of street incivilities (Figure 2). The environmental context of one's surroundings therefore has a psychosocial impact on how people feel about themselves and their local environment. These results suggest that if people feel bad about the environment in which they live, they are more prone to anxiety and depression and less likely to avoid unhealthy behaviour such as smoking (Curtie *et al*, 2005). All of which has societal, emotional and financial impacts on the country as a whole.

Figure 2: Health and street level incivilities (Curtie *et al*, 2005)



² 'Environmental incivilities' are defined as 'any aspect of the environment that people are capable of discerning through hearing, sight, touch or smell and about which they may be inclined to feel negatively' (Curtie *et al*, 2005).

³ Such as somewhere safe for children to play (Curtie *et al*, 2005).

It is evident that the quality of local environments – environments in which people live, work, play, as well as age – can directly affect decisions that residents make about their lifestyle; decisions that can have a direct impact on health and wellbeing. It is in deprived areas that poor local environmental quality is most apparent and residents are less likely to take exercise and socialise, impacting on health and both psychological and physiological wellbeing. Factors as simple as the attractiveness and perceived safety of the local environment are crucial if people are not to be pushed into an essentially sedentary lifestyle (Department of Health, 2005).

Poor local environmental quality is a trigger for poor physical and mental health and part of a limitless number of compounding factors that perpetuates existing poor health and compromises the achievement of good health and wellbeing. That is to say, poor local environmental quality is a compounding factor of many physical and mental health issues in that it does not inspire or motivate healthy living and the energy expenditure required for good physical health. Nor does poor LEQ provide a background or ambience where mental health issues can be resolved, reduced or dealt with effectively and sustainably.

There is limited information on the specific impact of local environmental quality as part of 'the environment' on health outcomes. Further evidence needs to be gathered on the relationship between local environmental quality and scale of health impacts, and the cost benefits of interventions through improved local environmental quality.

Recommendation 5: Research should be conducted to determine the relationship between local environmental quality and health impacts.

Social Justice and Deprivation

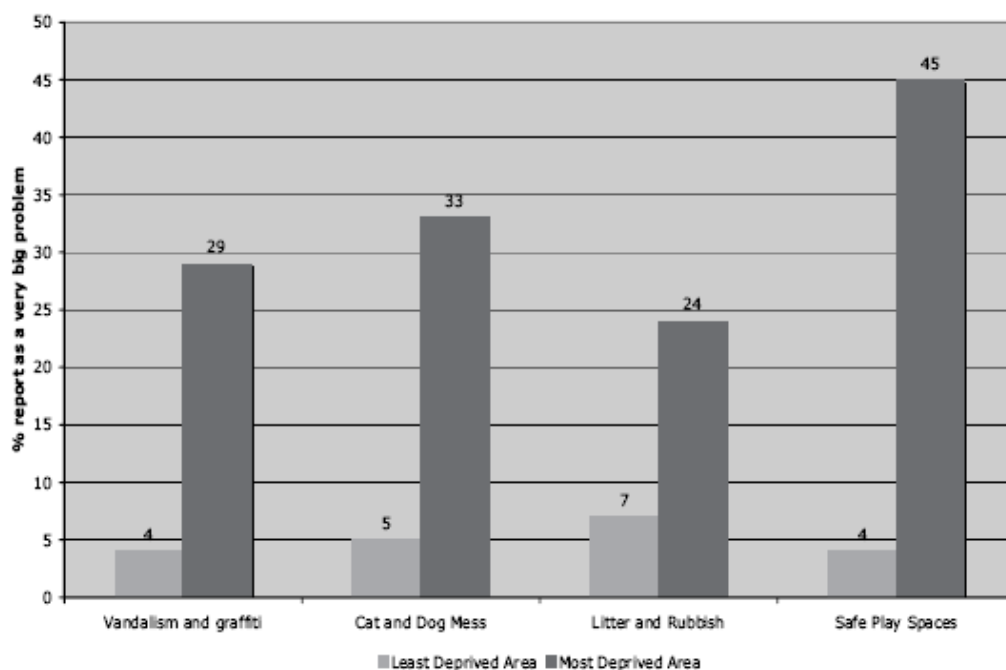
The role of deprivation

A perception based survey from Scotland provides evidence that those living in deprived areas report a much higher level of environmental incivilities and environmental goods (see footnotes two and three) especially street level incivilities. For example 33% of those living in deprived areas felt that dog/cat mess was a problem against 5% of those living in the least deprived areas (Curtice *et al*, 2005). Likewise 45% of those living in deprived areas felt that a safe place for children to play was a big problem against 4% of those who live in the least deprived areas

(Figure 3) (Curtice *et al*, 2005). It concluded that tackling street level incivilities and the paucity of environmental goods in deprived areas is vital in achieving environmental justice in Scotland (Curtice *et al*, 2005).

Perceptions research in London revealed that interviewees living in deprived areas were least satisfied with cleansing standards. (ENCAMS, 2009). Burningham and Thrush (2001) remark that social deprivation is tied to poor local environmental quality. Recent research using national perception survey data revealed that affluent neighbourhoods tend to have higher levels of street cleanliness than deprived neighbourhoods although this difference is smaller in some local authorities than others (Hastings *et al*, 2009). This highlights that social justice and environmental justice are closely linked and a key aspect of social inequality is the difference between neighbourhood environmental inequalities.

Figure 3: The impact of deprivation on perceptions (Curtice *et al*, 2005)



Challenges

Research based on discussions with environmental service providers highlighted four risk factors in relation to environmental problems (Hastings *et al*, 2005):

- Physical characteristics – open and landscaped areas are problematic as are obstructions such as parked cars and street furniture
- Social composition – the presence of children and young people was strongly associated with littering whilst increased numbers of economically disadvantaged households can result in local streets being busier with parked cars due to economic inactivity
- Intensity of use – density of housing or population may also lead to more intense use of an area and is a factor that correlates with deprivation as low-income households tend to live in smaller properties, often terraced housing and flats
- Attitudes and behaviours of neighbourhood residents - reduced numbers of residents owning their property has an impact and it is suggested that there is also a link between property ownership and environmental stewardship

Contemporary research conducted by Hastings *et al* (2009) has looked at national empirical survey data to demonstrate the links between poor local environmental quality and deprivation. Regression analysis of this data identified a number of statistically significant factors which impacted on litter levels. These included high levels of poverty, students, PRS flats, lower income families and local authority local authority high flats.

Hastings *et al* (2005) also refers to the problem of institutional rationing where a mismatch exists between the service needs of deprived neighbourhoods and the service levels provided to them. Thus resource and services fail to take into account that deprived areas have inbuilt challenges ranging from high housing densities to high proportions of young people. They note that there are some neighbourhoods which are characterised by a demoralised population which feels shame about the area in which they live. In these areas service provision is below what is required as a result of overwhelming workloads and decreased job satisfaction. This is supported by research undertaken by ENCAMS (2009) which reports that there is a climate of resignation regarding poor local environmental quality in deprived areas.

At the other end of the scale there are neighbourhoods which are characterised by high levels of cleanliness and low levels of deprivation where residents know how to use local systems for ensuring their streets are kept to a high standard which can consume resources and as a result can mean less capacity to address the problems of more disadvantaged neighbourhoods.

The most successful neighbourhoods in tackling local environmental quality problems are those where regeneration and service improvements deliver increased energy and an upward spiral of improvement into a neighbourhood. As a result operatives tend to feel more empathy with residents and are willing to go beyond their job role to prevent an area slipping back to its previous state. For long term success, however, it is important that there is a lasting change in deprived areas not just capital regeneration. Small local environmental quality problems can be symptoms of deeper and complex issues (Burningham & Thrush, 2001).

Delivering equitable service provision

There is evidence of resources being skewed towards deprived neighbourhoods but that expenditure levels and the nature of service provision do not necessarily follow risk and need. In one case study, unbeknown to the local authority, resources for routine programmed services were skewed towards affluent neighbourhoods even though more deprived neighbourhoods had more spent on them. Analysis revealed this increased spend was due to increased expenditure on responsive services rather than programmed services. Another case study highlighted the importance of absolute service levels where the authority spent five times more in the most deprived neighbourhoods compared to the most affluent neighbourhoods but the absolute levels of programmed services delivered was below that provided by the other case studies analysed. In this case the acceptable outcomes in deprived areas were delivered through special initiatives and responsive top-up services (Hastings *et al*, 2009).

The engineering of staff workloads so that operatives deployed in areas with lots of risk factors had the capacity to tackle problems was used in the London Borough of Lewisham. As a result equal levels of service provision were delivered across the authority to a high average standard. To achieve this, they spent 35% more in the most deprived neighbourhoods compared to those in the middle of the national deprivation scale. (Hastings *et al*, 2009).

The study concludes that,, whilst it is important that resources are skewed towards more deprived areas, the right level of the right kind of service according to need must be provided. Delivery of inappropriate and inefficient forms of service suggests more equal outcomes could be achieved within existing budgets and deliver improved efficiencies (Hastings *et al*, 2009).

Antisocial Behaviour

The role of antisocial behaviour

Recognition of the linkages between the Clean and Safe agendas has been at the forefront of much of the policy and legislation of the last decade. This is most effectively illustrated by the current Home Office definition of antisocial behaviour, which includes vandalism, graffiti and other deliberate damage to property or vehicles; rubbish or litter lying around; and abandoned or burnt-out cars within its seven strands of antisocial behaviour. According to the Institute for Criminal Policy Research (2005), environmental antisocial behaviour comprises one of three broad categories of antisocial behaviour. It comprises behaviour that deliberately or through carelessness degrades the local environment such as littering, fly-tipping, graffiti and dog fouling (Institute for Criminal Policy Research, 2005).

The Urban Green Spaces Taskforce (Department for Transport, Local Government and the Regions (DTLR), 2002) remarks that antisocial behaviour, vandalism and petty damage are some of the most frequently cited complaints about the conditions of parks and green spaces. It is reported that 31% of parks have unacceptable levels of vandalism; whilst 60% of local authorities are viewed as not tackling the problem or tackling it with limited success (Greenspace, 2004). 11% of parks' maintenance budgets are spent on repairing or replacing vandalised and misused items in parks at an estimated cost of £64m a year in the UK (Urban Green Spaces Taskforce Working Group 6 In CAGE Space, 2004c). 91% of people believe that parks improve the quality of life yet one on five think they will just get vandalised (CAGE Space, 2005).

There is a great deal of evidence that people's behaviour is affected by their local environment and visa versa. Areas spoiled by litter and graffiti encourage further antisocial behaviour. This is borne out by recent research by the University of

Groningen in the Netherlands (Keizer *et al*, 2008) which showed a direct increase in trespassing, dropping litter and even stealing money if the environment is poorly managed and neglected. The reverse is also true. The research confirms the 'Broken Windows Theory', that disorder and disobedience grow in neighborhoods where rules are openly flouted and the environment is degraded. The concept of the Broken Windows theory is that small problems not dealt with can spiral out of control to engender further crime in a vicious circle. Whilst there are debates around the methodology of the research it has led to the development of a number of approaches to tackle antisocial behaviour using a method of cracking down on low level crime. Nowhere was this more the case than the New York Transit Authority which adopted a hard-line approach on the transit system (ENCAMS, 2003).

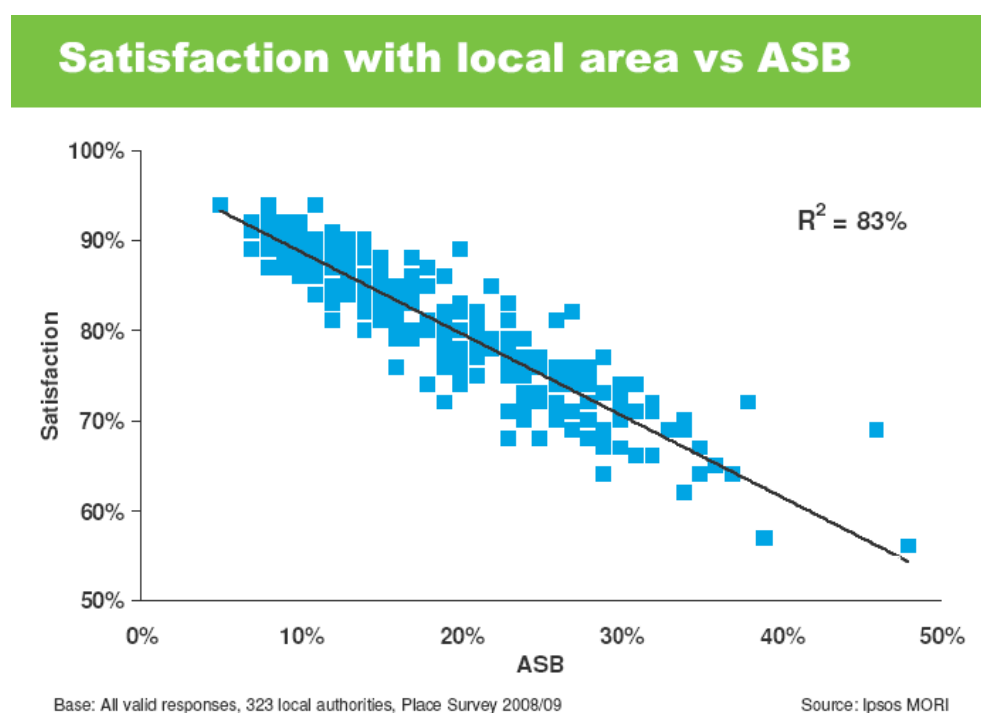
The impacts of environmental antisocial behaviour

In London a link was discovered between the cleanliness of an area and the levels of safety felt by local residents (ENCAMS, 2009). The research divided London boroughs by Best Value 199 scores for 2007/8 and Indices of Multiple Deprivation. The perceived safety and appearance of an area was equally important with almost all interviewees across the four groups responding that they felt it was extremely important how an area looks, although it was more important to those over 55. Furthermore, residents in affluent boroughs were more satisfied with their local area and felt safer than those residents living in deprived areas. Those residents living in the cleanest boroughs were also most satisfied with the appearance of their place and felt their area was safer compared to those living in deprived areas (ENCAMS, 2009). There is a correlation between residents' views of the appearance of an area and their feelings of safety (ENCAMS, 2009). Furthermore, correlation analysis revealed that the more concerned people are with the appearance of their local area, the more concerned they are about violent crimes (ENCAMS, 2009)

Curtice *et al* (2005) note that people who report higher levels of street level incivilities or absence of goods are less trustful of others and are more likely to have a fear of crime. For example, 80% of those who report low levels of street level incivilities feel safe compared to 46% who report high levels of street level incivilities. Liggett *et al* (2001) found that litter was positively correlated with the incidence of crime at bus stops in downtown Los Angeles and adjoining neighbourhoods.

Perceptions of safety are important to users of space. CABE Space (2004a: p10) notes '*Children and young people, for example, are often prevented from using parks or streets because of their parents' fears about crime, whilst women often also face particular concerns. Physical changes to, and the better management of, public space can help to allay these fears*'. An analysis of the *Place Survey 2008/9* uses the graph below to illustrate how the seven strand antisocial behaviour index shows the strongest relationship with area satisfaction (satisfaction with the local area improves with reduced concern about antisocial behaviour) (Ipsos Mori, 2009). It concludes that these seven measures appear to capture what is important to people about quality of life in local areas (Figure 4).

Figure 4: Satisfaction with local area Vs ASB (Ipsos Mori, 2009)



Fear of crime and the safety and security of green spaces are also the biggest concern of users, although it is argued that parks and green spaces are no more dangerous than the surrounding streets. The perception of danger concerns users and keeps potential visitors away (DTLR, 2002). Dog fouling, litter and graffiti is also a major issue for park users and are the most evident signs of decline. This has not been helped by the divisions of labour and responsibilities for managing public spaces within local authorities (DTLR, 2002).

Tackling environmental antisocial behaviour

The view of Urban Green Spaces Taskforce (DTLR, 2002) is that prevention is better than cure. Greater usage can help tackle safety fears and other daily nuisances. Thus cleaner and well maintained spaces offering a range of activities are more likely to be populated and therefore safer. The role of design in tackling many issues can remove the opportunities for vandalism. For example, the use of sight lines to visible park exits can all enhance feelings of safety (CABE Space, 2005). In order to reduce antisocial behaviour in parks and open spaces, CABE Space (2005) recommends that all designs are of a high standard and include the views of all relevant professionals and value the contribution of users. Furthermore, the communities should be involved early in the process and should include 'problem' groups and provide activities and facilities for young people.

CABE Space (2004c) puts forward four approaches that are successful in tackling antisocial behaviour in green spaces which were also put forward by the Urban Green Spaces Taskforce (DTLR, 2002):

- Responding rapidly to problems such as vandalism sends a clear message that abuse will not be tolerated
- Reinstating wardens and parks rangers reassures visitors and discourages antisocial behaviour
- Fully engage the community in the process of reclaiming the park – including problem groups
- Reassert clarity of design with clear site lines

The benefits of investing in public space include: successfully tackling antisocial behaviour; achieving long-term cost savings and creating neighbourhoods where people want to live (CABE Space, 2004c). Newby (2009) remarks that green space has a social value around health, food production, social cohesion and crime reduction. This is supported by the work of nfpSynergy which estimates that for every £1 invested into the British Trust for Conservation Volunteers' (BTCV) People's Places programme, £4 was generated through reduced crime, improved leisure and increased employment (BTCV, 2008). CABE Space (2005) note that in Pearson Park, Hull, improvements from local and national funding sources led to a drop in crime of 75%.

CABE Space (2004c) argues that local authorities should invest in good design, staffing and maintenance of public spaces to tackle the problems associated with antisocial behaviour and prevent areas starting on a downward spiral decline. However, target hardening (such as CCTV) should not be the only response to antisocial behaviour in public places but should be part of a wider co-ordinated approach (CABE Space, 2004c).

Good design is important for reducing antisocial behaviour compared to CCTV solutions (CABE Space, 2005). Approaches can focus on target hardening in the fortification of areas although this is not always effective. For example, studies have shown CCTV reduces crime by 5%, compared to 20% through improved street lighting (CABE Space 2004c). Alternatively, a place making approach can be taken which looks at delivering well maintained public spaces which can reduce vandalism, antisocial behaviour and so on (Greenspace, 2004 in CABE Space 2004c).

Design

Why does it matter?

Good quality urban public spaces contribute to a wide range of policy outcomes including:

- Promoting health and wellbeing
- Enhancing safety and security
- Helping with community cohesion
- Addressing environmental and social justice
- Generating economic activity
- Reducing green house gas emissions and adapting to climate change (Policy Exchange, 2009)

Well-designed, well-managed and maintained public spaces are likely to be used in a positive way and encourage pro-social behaviour and generate positive social, economic and environmental value for local areas (RSA, 2000). However, poor quality public spaces which are poorly designed, managed and maintained can contribute to antisocial behaviour such as graffiti, littering and fly-tipping and result in fewer people using those spaces (CABE Space, 2005). The Urban Taskforce (2005) and New Local Government Network (2009) notes that neighbourhoods that have well-designed, well-kept public spaces provide residents with the opportunity to

interact with other residents in surrounding urban spaces, such as local shops and markets to help develop societal relations between neighbours where people can spend time outside their homes.

Borden (2005:pp22) writes that: *'We should realise that space is produced by all of us. In short, we all make the public realm and the public realm makes us. Secondly, it is not only the activities of shopping, walking, sitting and looking that make up public spaces. Everything we do helps make the public realm, from commuting and driving to using our senses of touch, smell and hearing, to emotional experiences like talking, making music and falling in love. Thirdly, different people have different ways of using public space – the elderly may think about the public realm differently from those who are younger, or there may be a feeling that White British cultural spaces are at variance with Asian British cultural spaces. Fourthly, we can also delight in being different within ourselves, so that each of us might be at once a photographer and a scaffolder, old and young... we can take risks with ourselves, with how we create public spaces at various times, attitudes and stages in our lives'*.

Challenges

Britain is in the middle of the largest public building programme for more than a generation (Sorrell, 2006). This includes infrastructure improvements such as Cross Rail, 160,000 new homes in the Thames Gateway region, new Olympic facilities, Building Schools for the Future, LIFT programme for neighbourhood health centres and the first new towns for 40 years. Despite the current economic climate, the majority of these projects will still be delivered due to their long-term strategic importance. This, therefore, provides a unique opportunity to design new public spaces which discourage littering and have the attributes of maintainability and durability. However, the design challenge is equally important to the renovation of existing spaces. The Urban Task Force (ODPM, 1999) noted that 90% of the urban buildings and infrastructure which will exist in 30 years have already been built.

The importance of design has not, to date, significantly taken into account the need to address the longer-term maintainability of cleansing. Maintenance and specifically cleansing has been considered by central government and CABI (DETR & CABI, 2000). Large scale projects such as those set out in *'This way to better streets'* (CABI Space, 2009) also make reference to the longer term maintainability of public space. However, insufficient emphasis has been placed on the creation of

maintainable environments, in other words practicability, durability and maintainability. The focus has been predominantly on 'aesthetics' and 'function'.

Problems with design are more likely to be encountered through smaller scale enhancement schemes rather than extensive enhancements of urban centres where quality is sometimes bypassed due to budgetary constraints through design, value engineering, materials and after-care (Keep Wales Tidy and the Welsh Assembly Government, 2009).

Research undertaken by Keep Wales Tidy and the Welsh Assembly Government (2009) discovered that 70% of street cleansing departments were not consulted on the cleansing and maintenance impacts of proposed developments. Where consultation had taken place, this tended to focus on the placement of bins which had already been purchased by the developers. The most common design problems encountered by local authority cleansing officers were:

- Chewing gum stains to a variety of paving types
- Paving material exacerbating stains
- Jet washers and mechanical sweepers removing paving joints, causing litter to be trapped and cracks to slabs
- Litter trapped beneath street furniture, such as tree grilles, utility cabinets, bins and benches
- Cluttered footways impinging upon mechanical and manual cleansing
- Too much variation in the type of litter bins provided within an area
- Indefensible space providing cover for environmental crime
- Redundant planters serving no function
- Graffiti and flyposting on utility cabinets and lamp posts
- Right-angled kerb lines making mechanical sweeping difficult
- Planters overgrown/disused attracting litter
- Problems often concentrated in areas that have been subjected to enhancement, with many years worth of temporary/short-term maintenance (Keep Wales Tidy and the Welsh Assembly Government, 2009)

An interesting development over the last decade has been the development of de-cluttering. Examples include the *Streets for All* guidance for practitioners by English Heritage which quotes:

'Chaotic and cluttered streets are a symptom of a community in decline with low self-esteem. Investing in quality solutions reduces maintenance costs and makes cleaning easier' (English Heritage, 2000:p1).

It is noted that from a designers' viewpoint, litter is defined as waste in the wrong place and the wrong place it ends up in is public space. However, in design terms it is a temporary problem which, whilst costly, can be easily corrected as it is only in the wrong place until someone puts it in the right place (Policy Exchange, 2009). In this sense, littering could be considered as a *'tragedy of our commons'*.

Changing the role of design for improved local environmental quality

Physical design can shape people and their activities. CABE and other organisations have published material that puts forward the importance of design in creating quality of place and quality of life. *Manual for Streets*, March 2007 provides advice for the design of residential streets. It includes references to the importance of design in creating successful neighbourhoods (Department for Transport, 2007). Community engagement is another issues explored as important to address positive use and design of public space (CABE, 2010).

Maintenance and repair of an environment needs to be taken into account at the design stage and vice versa. Defra sets out a series of challenges that are faced on a daily basis in relation to the care and maintenance of landscaped areas (Defra, 2005). There are many departments and agencies involved in creating landscaped areas, which are not responsible for their long-term maintenance and the maintenance is often split between various teams and even departments such as leisure services and street cleansing functions. The lack of cohesion in addressing the care and maintenance of public space places more pressure on resources and makes providing high quality maintenance more difficult. This should be based around issues such as understanding non-specialists' perspectives (quality of life); the relationship between physical design and maintenance operations (practicability); the causes of wilful, accidental and natural processes damage and how to protect

against them (durability); understanding what makes places unique (appropriateness, identity) and managing/enabling the adaptation of environments in response to constant changes in society and the nature of activities (sustainable communities). The lack of integration with departments and agencies who plan and design new spaces and buildings has been flagged up as a problem by the New Local Government Network (2009). The Policy Exchange (2009) notes that commissioners and designers of public spaces should engage with the people who will use, manage and maintain them as early as possible in the design process to ensure that they are easy to maintain. Thereby preventing the deterioration of new public spaces which whilst look good in photographs and win design awards, may be difficult to clean and maintain.

CABE Space (2004b) states in its '*Manifesto for Better Public Spaces*' that it will ensure that everyone understands the importance of good design to the vitality of our cities, towns and suburbs and that designers, planners and managers all have the right skills to create high-quality public spaces. The Urban Task Force (ODPM, 1999) recommended local authorities should require local authorities to prepare a single strategy for their public realm and open space dealing with provision, design, management, maintenance and funding.

It is evident from this section that the planning and design system needs to establish a mechanism whereby suitably trained officers are able to comment on planning applications and designs from the point of view of cleansing requirements. One potential tool is that of a statutory 'litter appraisal' as part of plans for large developments (Keep Wales Tidy and the Welsh Assembly Government, 2009). This could include that a range of grounds for refusal are established in addition to reinforcing Development Control powers to prevent amendments to approved waste management and related provisions during the construction process. Additionally, the Environmental Health and Food Premises' powers relating to waste should be explored to see how effectively they might be used more, or copied; through to the consideration of placing a duty on commercial property owners (including landlords of multi-occupancy housing) to ensure compliance with regulations covering litter, waste handling and materials storage within the boundary of premises at all times throughout the life of the buildings, irrespective of changes that may occur in tenants, commercial activities carried out, or packaging technologies.

World Class Places (Department for Communities and Local Government (DCLG) and Department for Culture, Media and Sport (DCMS), 2009) states the government's intention to explore the options for creating a scheme for built localities similar to the Blue Flag scheme for beaches and the Green Flag scheme for parks and open spaces. There is a need for such a scheme which makes reference to the current tensions between design and maintenance outlined above.

Recommendation 6: A gold standard award should be developed for the best managed places following the recommendations of *World Class Places*.

Recommendation 7: Statutory litter appraisals should be introduced for significant development projects

Case study: Designing safer, cleaner, better benches, Camden Council

Camden's Clear Zone Partnership and officers who specialise in design and crime have been working to design a range of better benches and bins that aim to prevent misuse, are easier to clean and are more inclusive. It is hoped that this will enable Camden to reintroduce benches in parts of the Borough that will encourage walking and improve streets and public spaces. The installation of the benches forms part of Camden's 'Smarter Streets' programme which looks to get more from the streets using less space and resources.

Problems with existing benches

Benches make an important contribution to walking and how people perceive and enjoy streets and public spaces. The problems with existing cheap park type benches, such as rough sleeping, are well known, but other issues consistently cause concern. People can monopolise benches for long periods of time and it is hard to move benches away from problem areas as they are bolted into the paving and drugs can be hidden in their joins and crevices. They can also create opportunities for crime, like bag theft and pick pocketing and they are easily vandalised or covered in graffiti, stickers and posters.

Benches often require extensive cleaning because litter collects in the joins, slots and under armrests or is left on flat surfaces. Bins are often moved away and benches are easily abused and vandalised. They can also remain wet and unusable long after it has rained. These 'park type' benches were found to be badly designed for modern streets and problems.

From brief to design

The brief started by identifying antisocial behaviour, cleaning and Disability Discrimination Act issues. Shapes and materials were then investigated while keeping some of the better features of traditional seating, such as good aesthetics that enhance the street. A landscape furniture design company, Factory Furniture, were chosen to create and manufacture the benches and bins. The design has a peaked top that forms a perch seat on both sides, which varies in height and sits on the footway. The peaked top deters rough sleeping, discourages people from leaving litter on it, and sheds water and rubbish. A recess is provided along both sides of the bench to encourage people to leave their bags safely behind their legs. Being made from a single material it has no joins, gaps or slots that could hold water, litter, leaves, and potentially drugs. The top of the bench undulates to deter skateboarders, and the Camden logo is recessed into both ends of the bench so it is easier to remove posters. The solid base is easier to clean around, provides a tapping rail and different coloured aggregates can contrast with the paving and match other local materials. Contractors can reposition the heavy benches and bins, but not the public, which keeps them out of desire lines and where they are best used. It also enables officers to reposition or reconfigure the benches to influence their use, create different seating patterns for events and concerts or temporarily remove them. The seating range includes a right-angled bench to connect others together or be used beneath a tree, as well as a slimmer, double-sided bench; and a single-sided bench to be placed against a wall (which provides a back rest). This helps to provide the right seat in the right location to encourage their use and minimise any problems. The bin is designed to sit next to the bench to save space, can stand alone, or be used as a bollard, and provides an informal perch seat on the back.



Prototype

A wooden prototype bench and bin were tested in July 2009. People found them comfortable, easy to sit on and get up from and instinctively used the bag recess. The perch seat encourages people to sit for only a short time discouraging loitering. Interestingly, people sat on the bench in many different ways. An unexpected benefit is that the different height and width seats encouraged people to share the bench, with it being able to seat nine people at one time in several different groups. The bench provides the equivalent seating of two park type benches, saving space and money. From these observations minor refinements were made to the pilot benches and bins. Four benches were placed on a new square for its opening on 11th September 2009. They are popular, very well used and are exceeding expectations. They will be monitored and assessed against the original design criteria for three months to identify how well they perform. Camden then hopes to commission and test other benches from the range in different locations.

Conclusions

The primary aim of the project is to re-introduce benches into parts of Camden where they have had to be removed due to complaints about loitering and antisocial behaviour, etc. The aim is also to minimise the need for cleaning and provide more Disability Discrimination Act features. A second generation design is also being investigated where the bins will be inserted into both ends of the benches, to provide more litter capacity (recycling, etc) forming a more compact and complete single solution. It is hoped that these improvements will include MI5 testing for anti-terrorism features so that they can be used outside train stations and shopping centres.

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Housing

Recent developments

The social housing sector has seen a large change over the last few years with an ongoing transfer of housing stock away from local authority control. The well-publicised housing shortages increase the focus on housing provision, including the design of new housing, as well as focusing on quality support provided by housing providers to residents.

The Urban Task Force (2005) remark it is vital that urban neighbourhoods should be vital, safe and beautiful places to live. This demands that ever greater significance be given to the design and management of the public realm. Well designed and maintained public spaces should be at the heart of any community. They are the foundation for public interaction and social integration, and provide the sense of place essential to engender civic pride. This is recognised by CABI Space (Gaventa, 2010) which calls for green space in social housing projects to be of the same quality as a Green Flag or Green Pennant park and every new housing development of more than 50 houses to have some public space designed into it. The TSA's *National Conversation* with residents showed that neighbourhood appearance, along with safety and security in the neighbourhood are a high priority for residents (Tenant Services Authority, 2009a)

Improved service delivery

The housing arena is undergoing changes to the regulatory framework with the Tenant Services Authority (TSA) and the Audit Commission (AC) addressing those changes, as set out in the Tenant Services Authority/Audit Commission Memorandum of Understanding July 2009. Its aims include making life better for residents through the delivery of better services and better places to live. There is also a strong emphasis on empowering residents and engaging with communities including through the TSA and AC. This builds on a strong history of engaging communities in the sector already. The TSA explores this theme in more detail (Tenant Services Authority, 2009b).

These developments reflect central government policy developments such as the Community Empowerment White Paper, *Communities in Control* (2008), and the newly reinforced Duty to Involve, Consult and Inform through the Local Government and Public Involvement in Health Act 2007. The Cave Review (DCLG, 2006a) and the consequent Housing and Regeneration Bill (2007) has aided the drive to establish tenant involvement in housing decision making and is now perceived to be a central element of good service delivery, although there is some evidence that engaging residents is not a given and there is some scepticism by residents (National Consumer Council, 2006). That said, engagement is a key factor to providing services be they delivered by housing providers, local authorities or others as explored by Ipsos MORI (2008), which shows citizen involvement has a positive impact on key quality of life measures such as social capital.

The DCLG white paper *Communities in Control: Real People, Real Power*, July 2008 aims to pass power into the hands of local communities and to increase the power of decision making amongst a wider pool of local people. The duty to involve representatives of local persons in the exercise of any of their functions, where they consider that it is appropriate to do so came into effect on 1st April 2009, is set out in section 138 of the Act and takes the form of an addition to the best value provisions of the Local Government Act 1999.

There is much evidence and good will to improve the quality of housing provision in both new builds as well as current housing stock. However, this is only part of the picture as the delivery of services including the provision of good quality local environmental quality is key to ensuring the continued quality of life of users of the housing areas. It is currently the case that Key Line Of Enquiry (KLOE) are in place that set out areas for inspection to establish the quality of housing related services by housing providers. Current Key Lines of Enquiry include references to good estate management and set out that organisation delivering an excellent service has estates which are clean, tidy and attractive. Abandoned vehicles, graffiti and vandalism are dealt with swiftly according to set, well-publicised procedures. This shows that local environmental quality issues are not ignored in the current inspection regime and emphasis is also given to antisocial behaviour reduction, but this aspect of maintenance is not a prominent with the KLOE framework and consequently the impact and focus on provision of this kind of service is not high. The regulatory framework is currently being reviewed by the TSA and AC. We would argue there is

a strong need to ensure local environmental quality related services are covered significantly to ensure quality of life of those living in the area being inspected is as high as possible.

Recommendation 8: Drive up standards of local environmental management by housing providers, if necessary through legislation.

The transfer of stock away from local authority control has not been without issues. There are instances of land in need of maintenance, for example clearing of litter or other local environmental quality issues, where ownership is unclear resulting in delays to cleaning. The skills for managing land for local environmental quality issues has historically sat within local authorities. The transfer of stock has in some instances meant that an organisation has responsibility for cleaning land without the skills required to cover it. Responsibilities for maintaining and cleaning are not always clear for the organisations/authorities involved (or not involved) as well as confusion amongst residents themselves.

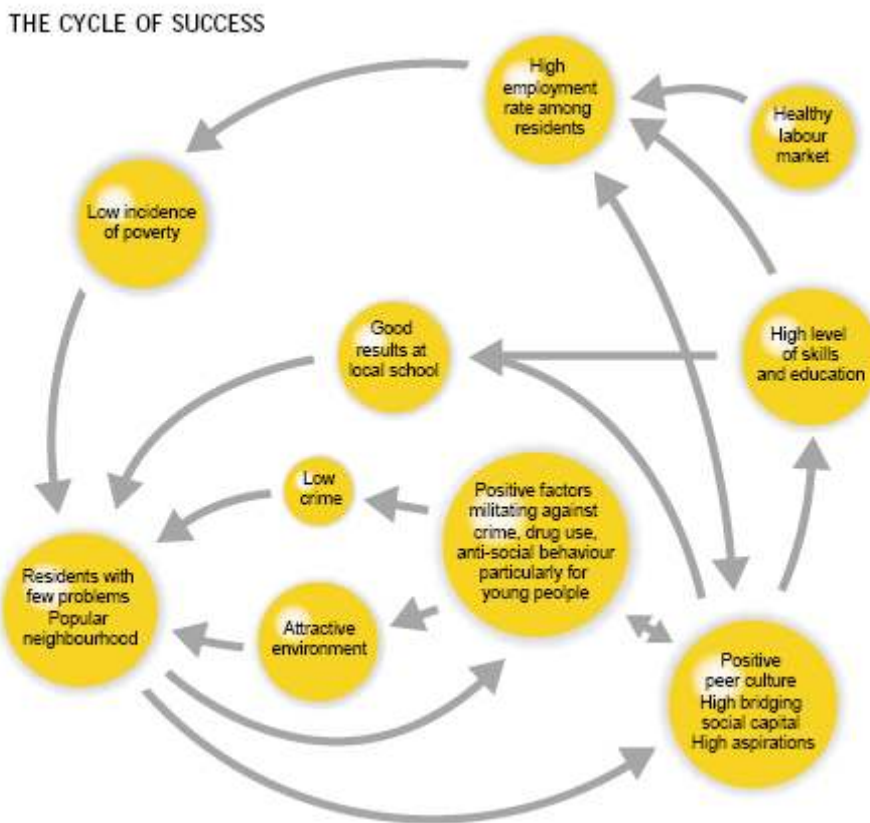
The increase in local decision-making, as well as the focus on providing good quality places to live that are well managed, is well set out as explained earlier. However, it is the case that much of this rhetoric does not reference the importance of high quality local environmental quality in order to achieve the quality of life and other community benefits. As argued throughout this series of policy papers, local environmental quality is at the heart of improving the quality of life of citizens and should therefore be given higher significance than is currently the case in much of the literature, guidance and research. It is for this reason that Keep Britain Tidy advocates the development of a 'gold standard' for local places.

Economy

The impact of local environmental quality on local economies

CABE (2005:p1 NLGN) argues that: 'As towns increasingly compete with one another to attract investment, the presence of good parks, squares, gardens and other public spaces becomes a vital business and marketing tool: companies are attracted to locations that offer well-designed, well-managed public places and these in turn attract customers, employees and services. In town centres, a pleasant and well-maintained environment increases the number of people visiting retail areas, otherwise known as 'footfall'. This notion of a cycle of success is illustrated in Figure 5 below.

Figure 5: The cycle of economic success ENCAMS (2005)



The Full Regulatory Impact Assessment of the Clean Neighbourhoods and Environment Bill, December (2004), outlined that there are considerable economic benefits to businesses and private individuals associated with cleaner neighbourhoods. Benefits to the private sector include:

- Attracting more customers and increased consumer spending
- Increased tourism
- Increased investment in local business
- Improved image of businesses
- Better retention of staff
- Increased house prices in lagging areas

The impact of local environmental quality on property, business, tourism and green infrastructure

Property

DC Research (2009) remarks that studies tend to focus on the impact of certain 'nuisance activities' that will tend to repel economic activities or populations and tend to focus on extreme situations. These studies tend to make use of cost benefit analysis or variants of these techniques. However, there are difficulties in proving the relationship between economic value and environmental quality. Firstly, environmental goods can be referred to as non-market values and as such their value or price is not decided or established by the market (the valuation of public parks is a case in point). Secondly, whilst environmental 'goods' may influence property values, it is also true that householders' levels of responsiveness towards changes in environmental goods is low. For example, residents or business owners would not necessarily move house or location because of marginal changes in the quality of environment unless such a change was so significant so as to affect other 'goods' such as health, quality of life, income and business turnover (DC Research, 2009).

Hedonic Pricing Methods can be used to estimate economic values associated with environmental attributes. Thus the price of a marketed good is related to its characteristics. Statistical models may be used to show how house prices vary depending on the characteristics of the house and the surrounding environment and how changes to these attributes can lead to changes in house price levels (DC Research, 2009).

DC Research (2009) comments that whilst the role of local environmental quality is well-recognised in regenerating areas of deprivation, there is a lack of clear objective and quantitative evidence about the role of local environmental quality as a lever for the economy. Furthermore, studies which seek to measure the impact of negative environmental externalities tend to be site specific and to focus on types of nuisance land uses which make it difficult to infer from such studies the general impact of environmental quality of economic value. An investigation by Palmquist *et al* (1997) on the impact of large scale pig farm operations on surrounding property prices in North California, USA revealed the average price of housing is \$63,000 compared to houses located closer to pig production with similar characteristics which were valued at \$57,000. An analysis of house prices and proximity to a hazardous landfill site in the USA revealed that each additional mile from the site was worth between \$9,000 and \$14,000 having controlled for housing type and characteristics (Smolen, Moore and Conway, 1992). Other research on the negative influences on property prices undertaken by Lake *et al* (1998) suggested that each decibel increase in road noise depressed property prices by an average of 1.07%; whilst having a road visible from the front of the property depressed the average property price by around 2.5%.

CABE Space (2007) notes that better streets are linked with higher market prices and in London it demonstrated that improvements in street design quality can add an average of 5.2% and 4.9% to residential and retail rents respectively. CABE (2009) note that well planned improvements to public spaces in town centres can increase trading by up to 40% and high-quality green spaces can increase property prices by 5-7% compared to identical properties in the same area. Good quality design is credited with achieving 21.6% higher rents for offices (Vandell and Lane, 1989). Dunse (2007) notes that city parks can uplift property prices by 19.97%, local parks by 9.44% and open spaces by 4.7%.

DC Research (2009) undertook a research project to understand the links between commercial property values and local environmental quality. The results of this analysis conclude that having attempted to control the influence of industrial structure, urban structure and property mix through a matching process, there appears to be a very strong association between commercial property values (as measured by rateable values statistics) and local environmental quality (as measured by Local Environmental Quality Survey of England data on the percent of good/satisfactory elements for three relevant types of land use).

Business

Research by Frontier Economics (2004) suggested that the benefits of investment in public spaces and public realm in central urban areas may outweigh the costs. This supports the work of Groundwork and the Centre for Local Economic Strategies (DC Research, 2009) which considered a number of case studies and concluded that the cost to the public sector of investment in local environment is significantly less than private funding into such projects and their wider economic impact. Therefore, it is concluded that without initial public sector investment the significant local economic impacts would have not have occurred and indeed the local economies highlighted would have continued on a downward trajectory. Therefore, they conclude that the economic cost of not investing in the environment is greater in the longer term than the economic cost of doing so.

'Good design may be particularly important for 'central investment'. For example, well-planned, implemented and maintained urban space improvements can potentially have a positive impact on the trading performance of most town centre occupiers, although the full effects may take two to three years to be realised' (Frontier Economics, 2004: p47).

The Association of Town Centre Management found that the cost of such projects typically ranges from between £1m to £10m. In most cases, this was less than 2% of the total annual turnover of the retail businesses within the town centre. They argue that most improvements in trading performance will therefore be enough to offset the cost of most schemes, without taking into account other benefits such as reduced crime (Frontier Economics, 2004).

ENCAMS (2005) notes that whilst all those involved in investment apply their own personal and company standards to what they see, it is clear that quality investors attach great importance to cleanliness and the attention to detail displayed by local environment managers. The main environmental factors influencing inward investors were:

- Overall image of the locality
- Accessibility – by road, rail and air
- Quality of estates and sites available
- Quality of landscape
- General quality of life

ENCAMS (2005) reports that between 1994 to 2004 St. Helens worked hard on improving the quality of public space. There has, subsequently, been an increase in commercial investment in the town and a dramatic fall in unemployment from 19% to just 2.5%. First there was an investment in infrastructure, followed by an investment in environment. The successful elements include:

- Investment in the public realm
- Investment in the retail and service sector
- Reducing the number of voids (empty properties) to below the national average
- Development of a night-time economy not just targeted at the 18-30 age group, but also at the 30–50 age group
- More restaurants and improved choice in leisure provision

In terms of influence on business decisions regarding the locating of operational units, it is noted that the quality of the physical environment is rarely mentioned in studies of large-firm decision-making. Even in those instances where this does take place, it is embedded within considerations of the quality of infrastructure (Biehl, 1991; Peck, 1995). At the level of small to medium enterprises, owners are mostly influenced by their home location and social capital gained from locating close to home or by moving to larger areas of population to access increased markets or skilled workers. The impact of environmental quality is rarely raised as an influencing factor (Figueredo *et al*, 2002).

Tourism and green infrastructure

Silverzweig Associates (1986) notes that there are unquantifiable benefits to litter reduction, such as improved ability to attract new businesses and increases in revenue from tourism. Gibbs (2000) remarks that environmental protection too is relevant to development because high-quality natural environments are required to attract inward investment, high-value employment and tourism.

The value of green space has been calculated by CABE Space (2009) through the development of an indicator which splits values between assets (condition of the park, park use and people valuing the park through their use). They argue that this allows for the value of parks to be captured in government accounts. The results calculated the value of one major public park at £108m against a nominal £1 per public park valuation by the local authority. A review undertaken by the Scottish

Government (2006) argues that proximity to green space increases both residential property values and rental income for offices. The Environment Agency (2006) estimates that green infrastructure is worth £2.6bn in Gross Value Added and supports 109,000 jobs in the north west alone.

Research undertaken into the value of the park and recreation systems of Philadelphia, USA estimated the park system provided the city with \$23.3m of revenue (through tax receipts from tourism and increased property prices); municipal savings of \$16.1m (through reduced air pollution and increased community cohesion); resident savings of \$1.1bn (through direct use and health benefits) and a collective increase of resident wealth of \$729.1m (through property values and tourism) (The Trust for Public Land & Philadelphia Parks Alliance, 2008).

Other associated economic impacts

Company brands are impacted by association with littering. Research by Parker *et al* (2008) discovered that brand evaluation suffers when a brand is viewed in a litter context. They note that brand personality, attitude towards the brand and purchase intention were evaluated more negatively by respondents compared to those who saw the brand in a supermarket or neutral context. Furthermore, the financial impact of this in terms of damage to brand equity or value has yet to be calculated and is an avenue for future research.

In Yelahanka, India it has been reported that the dumping of waste near the local air base had led to problems with birds in the area which were posing a serious threat to aircraft operations. Bird hits were a serious threat to both daily operations and a major air show held at the air base every two years (Deccan Herald, 2010).

A survey in Utah, USA determined that almost 80% of drivers have encountered road debris causing them to swerve from their intended path; whilst 8% of drivers have been involved in an accident caused by road debris and 47% of drivers have had their vehicle damaged by road side debris (Dan Jones & Associates, 2008). It is estimated that road debris is conservatively estimated to be responsible for 80 to 90 fatalities and 25,000 crashes on American roads each year (Forbes, 2003). The Mont Blanc Tunnel fire between France and Italy is referred to as the most tragic incident involving roadside litter. The cause of the fire was reportedly a discarded cigarette which entered the engine component of a truck and lit the paper air filter on fire. The disaster resulted in the deaths of 39 people and more than \$1bn of losses to the

region and resulted in the tunnel being closed for three years for repairs and upgrading (Leistikow *et al*, 2000).

Climate Change

An uncertain future agenda

Climate change has the potential to radically affect the delivery of street scene services in the future. These could range from water rationing for street cleansing services in the summer months to increased levels of detritus as a result of drier summers. The UK Climate Projections (Defra, 2009) suggest an increase in the average summer temperatures in England of between 3 to 5°C by 2080, an average increase of 1.6°C by 2020 and 2.3°C by 2040. It is predicted that summer rainfall will decrease by between 10% to 40% by 2080 with an average decrease of 7% by 2020 and 13% by 2040. However, winter rainfall is predicted to increase between 10% to 30%, with an average increase of 6% by 2020 and 10% by 2040.

Local environments will play an important role in helping to adapt for climate change in terms of slowing runoff (sustainable urban design schemes), coping with heavy rainfall, drought resistance and, through increased provision of greenery delivering photosynthesis, reductions in CO₂.

There are common sense arguments that by reducing litter, less energy will be required for clearance and disposal which is likely to contribute to a reduction in carbon emissions. This is in addition to the impact of clean streets on the number of people walking (see health section earlier) which could also reduce car-sourced carbon emissions in addition to providing a healthier nation.

Climate change poses a new challenge to street scene service provision, placing greater importance on effective management of local environmental quality to ensure the standards are maintained or improved within the context of energy efficiency. For example, increased pressure will see fuel efficiency technology increase in mechanical sweepers and in 2009 the first emission-free, fuel-cell-driven compact sweeper (CityCat H₂) in the world to operate on hydrogen entered operation in Basel, Switzerland (Johnston Sweepers, 2009; Bucher, 2009). Whilst this is the first mechanical sweeper of its kind in the world, local authorities will increasingly turn to such emerging technologies as the forthcoming Climate Reduction Commitment

obligations and the already functioning National Indicator 185 (CO₂ reduction from local authority operations) and its future replacements begin to become more challenging over the coming decades. Camden Council has already undertaken an energy review of its waste collection service, thought to be the first review of its kind by a local authority. The energy audit compares the environmental impacts of two waste collection practices, the co-mingled weekly doorstep collection service for dry recyclables (2006/07) and the previous system of kerbside sorting on the collection vehicles (2005/6). The former shows lower impacts, with a lower absolute distance to travel (London Borough of Camden, 2009). Bin design can play a role in encouraging recycling as espoused in Defra's guide to *Recycling on the Go* (Defra, 2008). A study by Keep Wales Tidy (2009) to encourage public separation of waste materials in street recycling units in Cardiff revealed a year on year increase in tonnage (Table 1).

Table 1: Amount of recycled material by year (Keep Wales Tidy and the Welsh Assembly Government, 2009)

Material	Tonnage 03/04	Tonnage 04/05	Tonnage 05/06
Landfill	N/A	4.37	18.72
Plastic recycled	1.1	2.75	5.47
Cans recycled	0.73	1.85	4.80
Glass	0.28	6.67	15.37
Total Recycled	2.10	11.27	25.64
% Recycled	N/A	72%	58%

Bringing It All Together – A Measure of Quality of Life and Quality of Place

This paper has highlighted some of the links which will need to be made in order to deliver quality places and reciprocal improvements across the sectors discussed above. The concept of quality of life and the subset of quality of place highlights a cross-cutting approach which incorporates the sectors discussed earlier.

Quality of life covers a broad range of topics including education, poverty, economic deprivation, health and liveability issues through quality of place (DCLG, 2006b). ENCAMS (2007:p11) has defined quality of life in the following way: '*Quality of life is the environmental, economic and social factors that affect how people feel about themselves and the place in which they live*'. Groundwork (2009) notes key factors

for quality of life – friends, trust and community engagement. There are also links between local consultation and perceived wellbeing. Research to discover what comprises quality of life found that health, relationships, money, leisure and jobs were the main drivers of quality of life. However, there was a relationship between personal quality of life and neighbourhood quality of life. Negative drivers of local environmental quality included crime, safety, neighbourhood appearance and local pollution (ENCAMS, 2007). The survey also revealed that the majority of people were satisfied with their life, with 75% of people ranking their satisfaction levels seven or above on a scale from one to ten (ENCAMS, 2007).

The concept of quality of life in England has developed through the Sustainable Development Commission, Local Government Act and through the Sustainable Community Strategy. The Audit Commission has been assessing quality of life, indicators as part of its Area Profiles project (ENCAMS, 2007). There has been a range of policy documents around both the quality of life and quality of place agenda including the Communities in Control White Paper and Place Shaping through the Lyons Report. Recent work includes CABE, Homes and Community Agency, Communities in Control and Planning Act (DCLG & DCMS, 2009).

The development of the concept of quality of life is in response to the fact that traditional measures of wellbeing, such as Gross Domestic Profit do not take into account quality of life. Only economic activity is included, regardless of its environmental or social impact. Litter, vandalism and antisocial behaviour, and health all impact on quality of life (Groundwork, 2009).

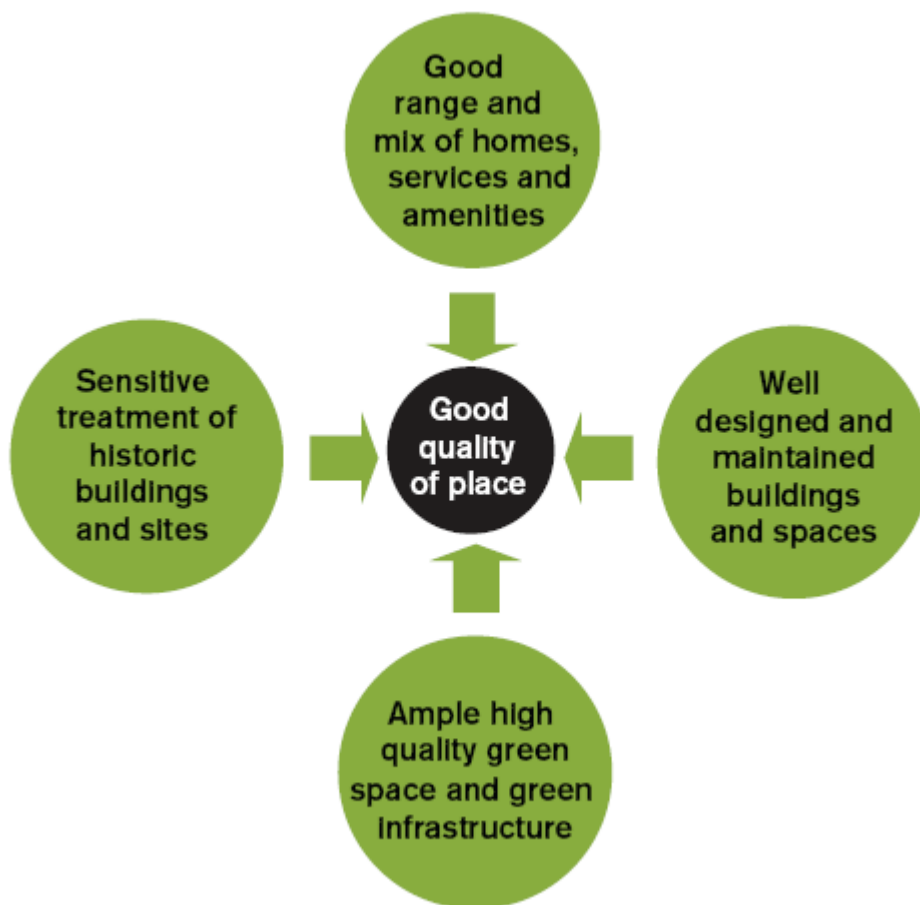
Quality of place

Quality of place may be considered as one of many subsets of quality of life. It follows on from the liveability agenda which, in the early 2000s, saw the development of a range of policy initiatives to tackle wider liveability issues and seek policy and legislative solutions through what would eventually become the Clean Neighbourhoods and Environment Act 2005. Liveability is defined by DCLG (2006b: p8) as being: *'About how easy a place is to use and how safe it feels. It is about creating – and maintaining – a sense of place by creating an environment that is both interesting and enjoyable'*. It is further commented that liveability concentrates on: *'The public realm and the built environment, in terms of both observed outcomes and citizens' perceptions of their local urban environment'* (DCLG, 2006b: p15). Good

quality of place can provide vibrancy, economic regeneration, social benefits (community safety, health, inclusive communities, and better public places) and environmental benefits (such as environmental sustainability and climate resistance) (DCLG, 2009).

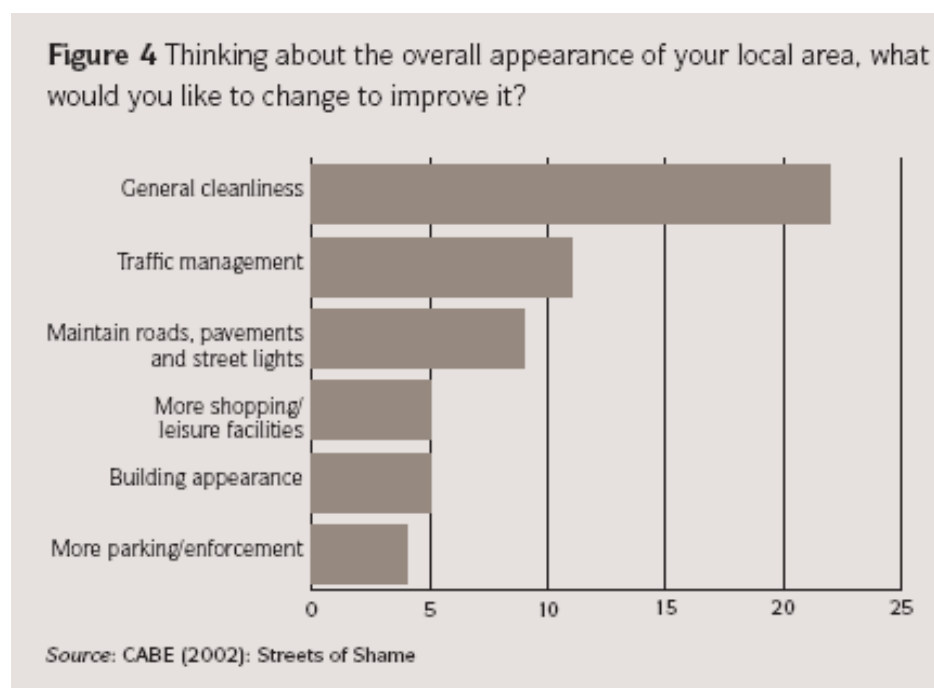
DCLG (2009) highlights four elements of quality of place (Figure 6) stating high quality places tend to score well in terms of all four elements. That is to say they have a good range and mix of homes, services and amenities, well-designed and maintained buildings and spaces, and good quality green space and green infrastructure. And they understand the value of and make the most of their historic environment – of the infrastructure and buildings that past generations have bequeathed them.

Figure 6: High quality places – the four elements of quality of place (DCLG, 2009)



According to MORI (2002), when asked what makes a good place to live the public responded: crime (56%); health (39%); and decent housing (37%). These were placed as a priority at the expense of place and quality of life issues which were ranked much lower: clean streets (24%); access to nature (17%); and open spaces (16%). However, priorities for improvement focused much more on place and quality of life issues (Figure 7).

Figure 7: Priorities for improvement (MORI, 2002)



Increased deprivation was also linked with decreased satisfaction (MORI/CABE Space, 2005). Furthermore, according to a study using the English condition house survey, a strong relationship was discovered between visual quality and local quality of life (MORI/CABE Space, 2005). The three key factors for area satisfaction were visual quality scores, proportion of housing above the fifth floor and proportion of terraces in an area. There was also a strong relationship between physical capital and satisfaction with an area. Residents' views of problems with rubbish/litter and scruffy gardens were negative drivers whereas visual quality scores/detached housing and rural location were positive drivers (MORI/CABE Space, 2005).

DCLG (2007) reviewed the various approaches to local environmental quality and noted that there were nine positive local qualities (mix of qualitative and quantitative) which comprised clean and tidy, safe, green, accessible, unpolluted, socially inclusive, secure and economic. Out of these clean, tidy and secure were higher

order concerns whereas lower order concerns were physically attractive or accessible which were determined by initial design.

Measuring quality of place

A range of existing methodologies exist to measure quality of place but they are very fragmented and the concept of cleaner, safer, greener needs to evolve if it is to reflect public perceptions of the local environment (DCLG, 2007). There are two potential approaches to measuring objective quality of life social indicators. These are a set of statistics that serve as a proxy for quality of life and subjective wellbeing indicators which refer to how people feel about the quality of their lives. It is recommended that the most effective indicator is a combination of the two (ENCAMS, 2007).

A range of ideas have been proposed to develop a quality of place indicator through a local environmental quality meta framework to ration 21 indicators into one indicator (DCLG, 2007). However, there are problems with such a rationalisation approach. The problem with any form of monitoring is how one can improve standards across a range of social and economically diverse areas and develop universal service standards. There are also concerns of over measurement and, in developing a quality of place measure, how one develops a holistic view which is not divided by professional silos and a scale of measurement (DCLG, 2007). Although local measures could well be used and the idea of a Community Quality Profile have been put forward as an idea to the single number problem (DCLG, 2007).

DCLG (2009: p41) has stated that it will: '*work with local government and other bodies including HCA, CABE and English Heritage to develop options for measuring quality of place, as well as options for a new indicator/suite of indicators for inclusion in the National Indicator Set for future spending rounds*'. This proposal charts a route map towards the development of a quality of place indicators which is vital to recognising the full range of cross-cutting agendas highlighted in this evidence paper.

Recommendation 9: The coalescing of National Indicators around a Quality of Place framework should be considered by Government as proposed in *Word Class Places*.

Contact Information

Please do not hesitate to contact us should you have any questions or would like to discuss any element of this report.

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