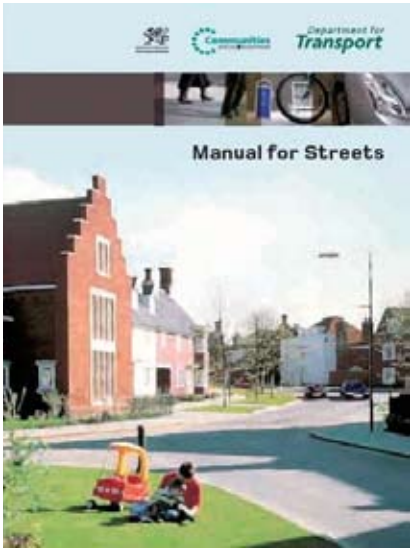
Briefing

This way to better streets: 10 case studies on improving street design

Streets are hard-working spaces. They balance a wide range of uses, communicate values and signify the transformation of neighbourhoods, towns and cities. To be sustainable and fit for purpose in the 21st century, streets need to respond to the demands of climate change and shifts in culture. CABE has reviewed 10 streets, looking at design development and implementation to unlock the lessons learnt. They provide an insight into recent developments in street design. This briefing summarises the findings. Details of the 10 case studies can be found at www.cabe.org.uk/streets.

CABE SPACE

Background



Street design policies, formalised in the 1960s through reports such as Buchanan's *Traffic in towns*[1], sought to simplify and organise streets through segregation. The result is that too many streets are designed for traffic movement alone, dominated by traffic signs, with people herded behind guard rails into pinch points to cross the road. We know that streets are far more than the tarmac between pavements, but that is where priority has been focused.

However, change is around the corner. *Manual for streets*[2], new government guidance, recognises the wider role of streets in creating successful places. It acknowledges that streets need to respond to the complexities of public life, promoting the interaction of people with different priorities, different circumstances and different expectations. It emphasises an interdisciplinary approach, innovation and flexibility, and the need for a better balance between pedestrians and vehicles in the design of residential and lightly trafficked streets. It also states that these principles could equally be applied to other urban streets.

Growing awareness of the importance of risk in public space has important implications for street design. The complex and unpredictable outcomes of removing barriers illustrate how reconsidering long-standing assumptions about safety and behaviour can provide opportunities for high quality streets[3]. However, research for the case studies indicates that the role of highway engineers and the scope of the legal and regulatory framework remain widely misunderstood.

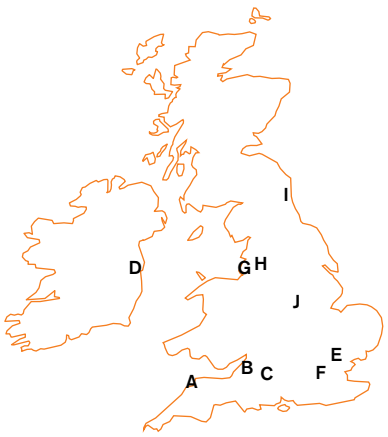
CABE's 2006 progress report on improving the quality of streets and public spaces, *Transforming our streets*[4], drew attention to the continuing need to overcome widespread confusion about risk, innovation, liability and the use of processes such as safety auditing. A 2007 research report, *Living with risk*[5], evaluates the impact of risk on the design of 10 public spaces and sets out an agenda for public space design that is risk aware, not risk-averse. The *Manual for streets* provides clarification of liability and street design. It proposes a quality audit to help integrate many of the fragmented processes involved in delivering streets.

1 Buchanan, C., *Traffic in towns*, 1963
2 Department for Transport, *Manual for streets*, 2007
3 Royal Borough of Kensington and Chelsea, *Report on road safety in Kensington High Street*, 2006
4 CABE, *Transforming our streets*, 2006
5 CABE, *Living with risk: promoting better public space design*, 2007

The case studies

The 10 case studies featured in this briefing and in much more depth on CABE's website (at www.cabe.org.uk/streets) help us to identify the five key principles behind successful streets:

1 Vision
2 Commitment
3 Integration
4 Adaptation
5 Coherence



A Bideford Quay, Devon
B Temple Meads Station forecourt, Bristol
C Devizes Market Square, Wiltshire
D O'Connell Street, Dublin
E Newhall Phase 1, Harlow, Essex
F Kensington High Street, West London
G Hope Street, Liverpool
H Ancoats and New Islington, Manchester
I Blackett Street, Side, and Sandhill, Newcastle
J Maid Marian Way, Nottingham

Case study	Context	Lesson
Bideford Quay, Devon	A waterfront street in a seaside town	**Take climate action**
Temple Meads Station forecourt, Bristol	A transport interchange approach and forecourt	**Provide continuity of quality skills and resources**
Devizes Market Square, Wiltshire	An historic market town centre with bus interchange	**Be prepared for the long haul**
O'Connell Street, Dublin	A major urban boulevard of national significance	**Select visual simplicity**
Newhall Phase 1, Harlow, Essex	A new community and network of residential streets	**Balance stakeholder needs and interests**
Kensington High Street, West London	A busy urban high street and arterial route	**Achieve organisational confidence**
Hope Street, Liverpool	An iconic street of cultural significance	**Connect with place and history**
Ancoats and New Islington, Manchester	A network of streets as part of the regeneration of an urban village	**Challenge long-held assumptions**
Blackett Street, Side, and Sandhill, Newcastle	A network of historic streets to serve a busy bus network	**Integrate slower design speeds**
Maid Marian Way, Nottingham	A repaired inner-city ring road with at-grade crossings	**Establish frameworks for communications**

1. Vision

Maintain a strong physical and organisational vision. Solve problems within that framework, adapting structures and service delivery accordingly.

Be confident as an organisation

Good street design requires the co-operation and integration of a wide range of professional disciplines, user groups and local authority directorates. Successful street projects can provide a remarkable boost to the confidence and organisational coherence of the local authorities involved. This is particularly the case when schemes challenge conventions and require unusual working relationships. The widespread confusion about risk, liability and the role of processes such as safety auditing often constrain fresh thinking. To deal with risk a clear design vision for a scheme, supported by strong design leadership is vital.[6]

Connect with place and history

Streets serve as statements of our collective values and culture. All of CABE's case studies demonstrate an increasing understanding of the emotional and psychological importance of streets, and the relevance of such qualities to social safety, well-being and the promotion of civility. The issue of tree replacement is one specific example where change and renewal can prove particularly painful and unpopular, calling for imaginative processes and public engagement to recognise the emotional as well as practical issues surrounding change. Streets should promote the character of place by responding to and reinforcing locally distinctive patterns of development, landscape and culture. The integration of creative artists into the design teams at the outset characterises almost all of the selected case studies. Some streets provide a perfect public gallery for monumental art, either permanent or temporary. Others incorporate quirky details to intrigue and delight at a scale that suits children or to civilise residential streets or simply to reinforce connections with place and history.

Kensington High Street works well as both a distinctive landmark and public space while also serving as a successful urban highway. This is a tribute to a combination of dedicated designers, progressive local authority officers and clear-sighted and determined political leadership. David Moores and Geoff Bray of the Project Centre never anticipated that the scheme would become such a significant and well-known icon of good street design when they started work in 2000 (both pictured with Peter Weeden, Royal Borough of Kensington and Chelsea).

Some streets assume a symbolic and iconic significance well beyond their function as spaces for movement and public interaction. In Liverpool, Hope Street serves the city's famous landmarks and cultural institutions, including the city's two great Protestant and Catholic cathedrals.

6 CABE, *Living with risk: promoting better public space design*, 2007

Challenge long-held assumptions

Streets and public spaces are hugely important as drivers of economic and social regeneration. Fresh ideas and challenges to long-held assumptions were evident in all the schemes. This suggests a much needed renaissance in the design, management and leadership qualities necessary to deliver great streets. Streets can serve as important statements of intent, helping to raise aspirations and demonstrate potential standards and quality. Such benefits can have wider value even when the physical measures involved in schemes are short lived and may need evolutionary changes.

Old Mill Street in New Islington, Manchester, represents a vision for a 21st century urban street, and its striking design is the centrepiece of efforts to raise hope and confidence in this rapidly changing former industrial area. The tight urban grid of Ancoats presents a particular challenge to developers and the Urban Village Company to evolve an approach to streets that matches the robust Victorian architecture and sets a new standard for integrating traffic with urban design.

Establish frameworks for clear, creative communication

Adapting or renewing existing streets can be hugely disruptive. Most streets have to remain in use during construction, and it is much harder to contain the works or shield the public from the inconvenience involved in construction. Establishing frameworks for public involvement and sharing information requires considerable creativity and resources. Handled well, street design can provide opportunities for community engagement, particularly to promote interest amongst children, who are often excluded despite the critical importance of streets to their lives and well-being. Some of the case studies highlight the extent to which imaginative and creative structures for discussion and communication can promote good design solutions.

Nottingham City Council used good public relations throughout difficult logistical site operations for the transformation of Maid Marian Way. Communication and consultation with the general public involved imaginative measures; for instance, where the planting of trees had to wait until the planting season, the word 'tree' appeared across the temporary paving. An imaginative series of handouts kept the public informed and a programme of art works and events celebrated the new pedestrian connection.

2. Commitment

Be committed to long delivery timescales and to management and maintenance after delivery.

Be prepared for the long haul

Almost all of the case studies reveal the remarkably long timescales required to initiate, plan and implement schemes. Ten years between first reports and completion of works on the ground is not unusual. Most projects require significantly more time than initially anticipated. The time required to raise public expectations and to establish the need and potential for change is usually underestimated. Timetables are frequently influenced by political timetables, trading cycles such as seasonal sales, other infrastructure changes, transport imperatives and major events. It is rarely possible to describe a street project as 'completed', given the constant pressure to respond to other developments in the surrounding environment and infrastructure. Adapting local structures and service delivery will help to sustain this.

Plan for high-quality skills and materials

The benefits of simple, durable materials, capable of withstanding the impact of heavy loads and continuous activity, were evident in many case studies. But there were still examples of declining quality through inadequate day-to-day 'low-level' maintenance. The loss of long-established skills and the lack of coordination between agencies involved in the maintenance and upkeep of streets have contributed to the decline of British streets. Britain has no equivalent of the straßenbauer or street builder, a professional skilled in all the interconnected elements of streets and common to Denmark, Germany and many other European countries. Although examples of excellent workmanship were evident from many case studies, we still need new techniques and training if British streets are to achieve the standards and quality of their European counterparts.

Devizes' triangular market square serves as the transport interchange for local buses and taxis, with traders and customers drawn together around the central monuments and warmth of local hostelries. There is little to alert the visitor to the 10 years' dedicated work and careful design that underpins the scheme – and it has succeeded in retaining and enhancing the vitality of this historic Wiltshire town.

The station forecourt at Bristol Temple Meads has withstood 13 years of intensive activity, coping with 6.7 million passengers a year and high volumes of buses, taxis and private cars. It demonstrates what can be achieved through the use of simple measures of good quality and careful design. The subtle deployment of materials avoids heavy-handed control and management, allowing the dynamics of the activities to resolve themselves by day-to-day use.

3. Integration

Accommodate everyone and every different use. Connect street networks to help people to choose to travel sustainably.

Integrate the widest range of people and activities

Civilised streets are used by the widest range of people and activities, and good 'inclusive' design should reflect this. It is important that those involved in street design consider from the outset how a full range of users are likely to access a street, rather than make this an afterthought. Inclusive design should not, in principle, impose barriers of any kind that affect the choice of movement[7]. Navigational clues, such as tactile paving and changes in level, will work best where such barriers are removed. Slowing down traffic means you can remove these barriers. However, several case studies reported here illustrate where problems remain. Programmes to help raise confidence levels and improve orientation and navigation are an important part of a public realm scheme for the young, older and disabled people.

Think outside conventional design

Many of the case studies demonstrate the potential for integrated streets where traffic speeds lower than around 20 mph can be encouraged through street design rather than through regulation. Disentangling the concept of 'design speeds' from 'speed limits' remains a critical issue to allow engineers and design teams to move outside conventional design. Examples include the acceptance of a wider palette of paving materials less constrained by standard surface friction requirements, and the use of narrower lane widths. Slower design speeds are critical to improving accessibility, providing maximum choice and minimising disruption to pedestrians.

In Newcastle, the arrangements for Blackett Street and Side/ Sandhill fall outside conventional highway arrangements. The city uses 'pedestrian zone' status to avoid the use of yellow lines, but the streets are open to bus, bicycle and some occasional motor traffic. Both schemes have had a vital role in the transport network for the city centre, and both demonstrate innovative solutions for the relationship between traffic and the public realm.

7 CABE, *The principles of inclusive design. (They include you)*, 2006

4. Adaptation

Take account of climate and culture change in order to deliver sustainable spaces that are fit for purpose in the 21st century.

Take climate action

The urgent need to reduce carbon emissions has yet really to influence street design in the UK. Yet its significance is clear, from traffic speed, lighting and planting right down to details like the selection of paving materials, and their transportation there. Streets will have to cope with heavier rainfall and more storms and flooding, as well as higher temperatures. Although street trees provide only limited opportunities for counteracting the emissions from traffic and energy use, they can be of immense significance in the overall composition, quality and scale of streets, providing edges and canopies. In many examples, trees can enrich space that would otherwise be highway dominated, helping to unify the overall composition and sense of space. With the threat of warmer temperatures and more extreme weather, streets will serve an increasingly important role in public space and we'll become more demanding of them.

Work on the stretch of street and quayside alongside the Torridge estuary in Bideford was originally tackled as part of a flood prevention scheme, initiated in 1992 by Devon County Council. The resulting streetscape is a good example of an integrated approach to waterfront design, civil engineering of flood defences, new buildings and the public realm.

5. Coherence

Deliver projects where organisational, political and technical issues are resolved into a coherent design solution.

Balance stakeholder needs and interests

In common with much good design, the most successful streets seem simple and effortless. This masks the immense organisational, political, logistical and technical problems that have to be balanced and resolved. Most street projects require Byzantine diplomacy between different authorities and stakeholders well as the patient balancing of a multitude of interests and the infinite diversity of human needs and circumstances.

Select visual simplicity

Almost all of the case studies illustrate the benefits from the careful selection of a limited palette of simple, durable materials and street furniture. Streets serve as the plinth and visual frame for architecture and street life, the backdrop for an unscripted play. Integrating street design into the wider built environment suggests a move away from standardised highway masts and poles, and the use of building-mounted lights to articulate space whilst achieving highway illumination standards. The case studies reinforce the importance of restraining colour and establishing consistent neutral tones in order to achieve coherence. Visual simplicity has important implications for traffic engineering and road marking, and raises difficult design challenges to provide clarity for those visually impaired people.

The Newhall development on the edge of Harlow exemplifies the efforts of progressive landowners, developers, consultants and local authorities to establish a new language for residential street design. The continuing role of the landowner through Newhall Projects Ltd. has supported the creation and running of a Project Centre. This has played an essential role in helping to establish a community in the new development, supporting and informing new residents and providing a wide range of services.

The scale and elegant proportions of Dublin's O'Connell Street, with its combination of buildings, sculpture, lighting and trees, positions it in the league of great European boulevards. It draws huge numbers of people towards its focal point of the spire and the GPO plaza. The economic and political confidence has been restored, allowing the street to reflect the positive aspirations of the capital and the nation.

Outstanding issues

Policy and practice is moving away from segregation of traffic and civic functions and towards a more integrated urban environment – an environment that is functional and accessible for all. But questions remain about how to ensure that all members of society can truly benefit from a well-designed public realm. There are also organisational challenges for local authorities seeking to integrate traffic engineering into a more comprehensive responsibility for public space. Above all, street design has to address climate change and the need for more sustainable design. This discussion will include detailed questions about traffic speeds, signals and movement, lighting, planting and the selection of paving materials. Changing weather patterns are likely to generate further questions in the design of streets to cope with greater rainfall or flooding, and higher temperatures.

CABE is encouraging local authorities, highways designers and developers to bring together the needs of all street users. Some disabled people, particularly visually impaired people, have concerns about the safety of streets, where there is not a clear distinction between spaces for pedestrians and motorists. We look forward to the findings of new work and research underway to help develop successful approaches to designing streets that work better for everyone. In support, CABE will be publishing a paper in 2008 to support an open dialogue about the conflicts that can arise between different users of our streets to help us move towards a better informed position on the design of integrated streets.

See www.cabe.org.uk/streets for further ideas, research and inspiration.

The review was conducted for CABE by Hamilton-Baillie Associates with Local Agenda.

With urban design and highways departments working together, quality and fortunes of an area's public realm have been turned around. In Newcastle, work on Blackett Street and Quayside has respected the historic context and emphasises links with the dramatic topography that defines that city.

This way to better streets presents the lessons learned from the design and management of 10 streets in England and Ireland. They range from a waterfront on a seaside town to a busy urban arterial route. This briefing, which also draws on CABE's expertise on street design, sets out five key principles that local authorities and others involved in street design should follow – vision, commitment, integration, adaptation and coherence – if they are to achieve the same results locally.

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The government's advisor on architecture, urban design and public space

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CABE Space is a specialist unit within CABE that aims to bring excellence to the design, management and maintenance of parks and public space in our towns and cities.

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Design better streets

This way to better streets is part of a wider CABE programme that provides research, guidance and case studies aimed at promoting high-quality street design. For more information see www.cabe.org.uk/streets

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