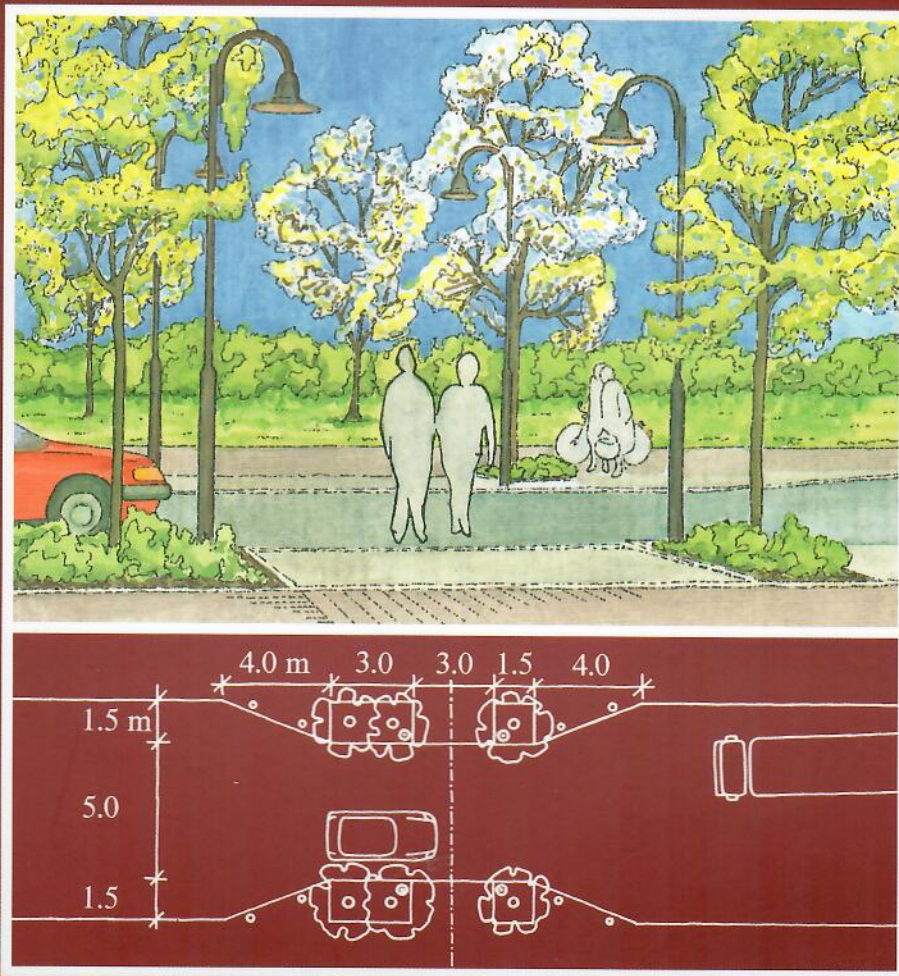


TRAFFIC IN TOWNSCAPE

Ideas from Europe



Civic Trust
English Historic Towns Forum

CIVIC TRUST

The Civic Trust is an independent charity founded in 1957.

Its aim is to create, enhance and sustain a built environment of quality, social well being and economic health in partnership with the community, government, both local and national, and business.

It does this through practical regeneration projects in inner cities, rural sites and heritage towns, and by raising standards and awareness through Civic Trust Awards and the Campaign for Liveable Places.

It has strong, continuing links with the community via nearly one thousand local civic societies.

For further information please contact:

The Civic Trust
17 Carlton House Terrace
London SW1Y 5AW
Telephone 071-930 0914

ENGLISH HISTORIC TOWNS FORUM

The English Historic Towns Forum (EHTF) was founded in 1987 in order to promote and reconcile prosperity and conservation in historic towns.

The Forum sets out to:

Establish and encourage contact between local authorities responsible for management of important historic towns and cities.

Organise seminars, workshops and conferences to discuss issues of common concern.

Encourage a corporate approach to the management of historic towns.

Circulate information of the approach of the authorities to critical management issues for historic towns.

For further information and a list of EHTF publications please contact:

English Historic Towns Forum
The Huntingdon Centre, The Vineyards
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IDEAS FROM EUROPE

Reaction to the booklet *Traffic Measures in Historic Towns*, (1993), was wider than we expected. Amenity society members as well as engineers, planners and architects suggested additional topics for consideration.

In the later debates at Civic Trust and English Historic Towns Forum conferences many people asked if there was more to learn from continental practice.

This therefore is a report on a study to collect ideas from Europe.

Whereas the examples we looked at do not show particular advances in traffic engineering techniques or even more highly developed theories of what constitutes urban quality, there are fundamental lessons.

Remarkably many schemes to manage or calm traffic had also been designed to take into account improvements to visual quality.

The findings form part of background information to ongoing discussions between EHTF and the Department of Transport.

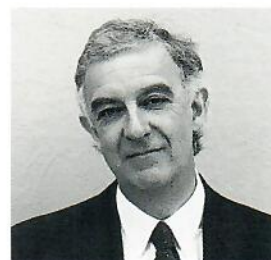
As before this booklet seeks to assist traffic engineers and urban designers working together.

It is also intended to be useful to people concerned with the amenity of their own town or village.

We hope it provides a glimpse of some current practice in Europe.

Colin J Davis RIBA MRTPI MBIM

November 1994



FOREWORD

BY THE DIRECTOR OF THE CIVIC TRUST AND THE CHAIRMAN OF ENGLISH HISTORIC TOWNS FORUM



Our first collaborative publication in 1993 stressed the need for care and thought in carrying out traffic measures in historic towns.

It was a guide to good practice in reducing street clutter and blending road related work with historic and sensitive areas.

Now with the help of professional colleagues in Denmark, Germany, Holland and Switzerland, the co-operation of the Department of Transport and the continued support of our sponsors, we look at current practice and trends in Europe.

The Civic Trust and the English Historic Towns Forum hope this booklet will foster close inter-professional understanding and encourage innovation and experiments to see how far some of the ideas can be applied in this country.

A handwritten signature in black ink that reads "Keith Laidler".

Martin Bradshaw
Director
CIVIC TRUST

Keith Laidler
Chairman
ENGLISH HISTORIC
TOWNS FORUM

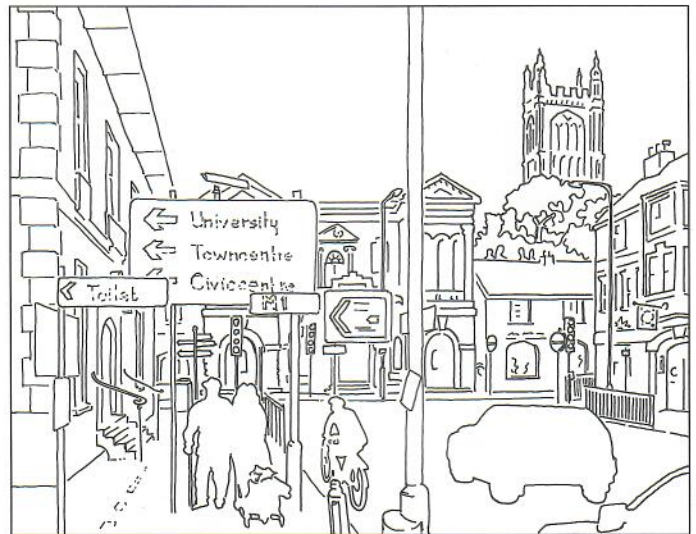
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TRAFFIC IN TOWNSCAPE

*More and more,
people can really choose
where they wish to live,
and they increasingly
seek a quality environment
for themselves and their families.
Such an environment
must be provided in our urban areas
if they are to continue to thrive.*

from *Quality in Town and Country*
Secretary of State for the Environment, July 1994.



Traffic measures sometimes seem to block out a town's character

IDEAS FROM EUROPE

This booklet contributes to the debate about traffic and the environment by bringing together a collection of ideas from Europe. They illustrate examples of current practice in the interrelation of traffic management and calming with improvements to visual quality.

VISUAL QUALITY WHAT IS IT?

Visual quality is difficult to define accurately. It is an attribute people recognise almost unconsciously. To attempt to specify it would seem to be as presumptuous as trying to specify beauty. Yet if it is to be taken into account at the design stage of a traffic measure, some clear guidelines would be useful.

Quality can certainly be disassociated from a particular style. Any style, historic or modern, may or may not be appropriate in a individual location. It depends upon the circumstances. Neither should the definition of quality necessarily rely upon one person's subjective judgment or a passing fad of fashion. **Quality should be long lasting.**

Underlying cleanliness, tidiness and standards of maintenance are universally recognised as essential primary requirements. The correct use of appropriate materials to fulfil a practical function is obvious to everyone as time passes and they see no need for additional maintenance. But there are other aspects of design that also contribute to quality and even delight.

On the following pages we attempt to convey in pictures, diagrams and words some of the criteria for visual quality and how they appear to have been successfully born in mind in the implementation of European traffic measures.

THE STREET AS A WORK OF ART

One approach to the definition of visual quality is to consider the street scene as if it was an artist's picture. Paintings can be visually analysed for instance by looking for a dominant feature. It may be an object which initially attracts the eye, acts as a focus and provides a reference for the remaining parts of the scene or picture.

A street scene can be visually analysed in the same way. There may be features which are instantly recognised and are dominant in a scene. But there are additional subtleties. The scene is often observed from a moving rather than a static position, and we can move through spaces as well as round objects.

The awareness of these visual surroundings is conveniently summed up by the term **townscape**.

TOWNSCAPE CONSIDERATIONS

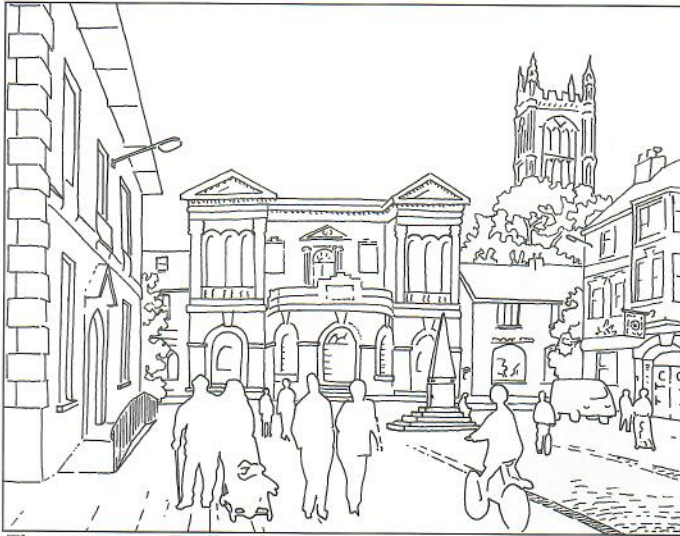
Townscape has no hard and fast rules. There are no essential conditions which should always be adhered to or avoided. Instead there are a number of criteria to consider and if appropriate take into account.

We deal with just four of them on the next pages and then on subsequent pages show how they have been incorporated into traffic measures:

1. The notion that a street scene, like a picture, is more comprehensible if it has a **focus of attention** (page 4).
2. An awareness of the size and shape of the space between buildings in a street or square. A **sense of space** (page 5).
3. The existence of a symmetrical design or relationship between objects to create a **formal visual order** (page 6).
4. Less obvious but more common, are relationships between objects linked by similarities in materials, shape, style or colour to provide an **informal visual order** (page 7).

There are of course other points to consider, such as the texture of surfaces, historic or stylistic context and the potential for combining new with existing landscape.

IDEAS FROM EUROPE



The same scene. Traffic adapted to townscape

Instead of having to
adapt townscape to traffic,
it may be feasible to
adapt traffic to townscape.

RELEVANCE OF TRAFFIC TO TOWNSCAPE

The space and equipment needed for traffic has a continuing effect on townscape. Though unlike physical danger, air pollution and noise, it is more difficult to quantify. Each new traffic measure therefore has the potential to change the appearance of a street, not only by changes in volumes and speed of traffic but by the number and disposition of traffic signs, the extent and design of carriageway and footway paving surfaces and any associated structures.

Change can be for the better. There may be opportunities to reverse normal trends. Instead of having to adapt townscape to traffic, it may be feasible to adapt traffic to townscape. Yet in many places some vehicles are essential. In a European street converted for priority use by pedestrians, service traffic is permitted at certain times. It is required to reduce speed and give way to pedestrians and cyclists. Traffic signs are reduced in number and size and the quality of the townscape can be more easily appreciated.

This form of pedestrian priority area is not lawful at present in Britain. In this respect as in the implementation of traffic calming schemes, **European experience is relevant.**

EXAMPLES FROM EUROPE

Some of the ideas on the following pages have been tested for five or ten years. Others are more recent. They all combine visual improvements with traffic measures. In some, traffic speed is reduced through villages, but volumes are maintained. Elsewhere speed and volumes are reduced in town centres or residential areas by the provision of alternative routes. And in pedestrian priority areas, speed and volume is reduced to the minimum required for servicing.

There are other ideas. In Denmark overall appearance is helped by the visual co-ordination of standard traffic equipment. We consider possible steps that could be made in Britain to reduce sign and sign fixing clutter (pages 9 & 10).

TOWARDS GREATER UNDERSTANDING

To conclude, we have to consider whether there are any fundamental lessons to be learnt from Europe that might suggest the reason for so many examples of visual quality. Closer investigation of the way some of the examples were carried out indicates that there is possibly a broader awareness of visual issues than is sometimes evident in the Britain. Two reasons emerged.

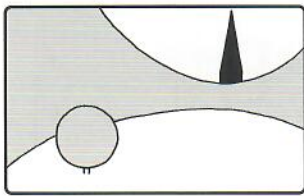
First many of the schemes were the work of interdisciplinary professional teams. Secondly the professional background and technical literature embraces a wider appreciation of the scope for incorporating townscape enhancement with traffic measures. **Visual considerations are an integral part of the original design process and not added later as an after thought.**

APPLICATION TO BRITAIN

The study concentrated on Denmark, Germany, Holland and Switzerland as these countries are among the foremost in the field and share many of our contemporary environmental ideals. Several of the ideas are directly applicable to this country. Some of course, because of different legislation and attitudes towards the rights and responsibilities of pedestrians, cannot at present be directly transferred. They would need carefully monitored evaluation as experiments.

The first step however is to assist in the mutual understanding of professional objectives and limitations. This is the purpose of the booklet.

Starting with some criteria for judging townscape, we then illustrate European traffic calming measures that accentuate the local townscape and are often more effective in traffic terms by being combined with townscape characteristics.



FOCAL POINT

TOWNSCAPE CRITERIA 1

These pages consider just four townscape criteria. Though not essential, they are concepts to bear in mind: elements of urban quality which people seem to appreciate.

We begin by looking at a street scene as though it was an artist's picture.

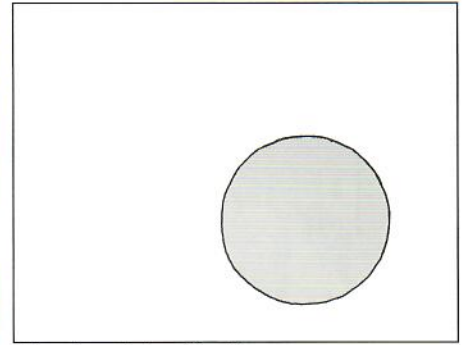
As we admire a landscape painting or a landscape, so we acknowledge that some urban views are more attractive than others.

In this landscape there is a very obvious focus of attention. The tree trunk initially attracts the eye.

It provides a reference for the other interesting parts of the scene: the nature of the multiple trunks, the quality of light shining through the leaves and the hedge row in the distance.



Landscape



Visual analysis of landscape

The same technique of visual analysis can be applied to a townscape.

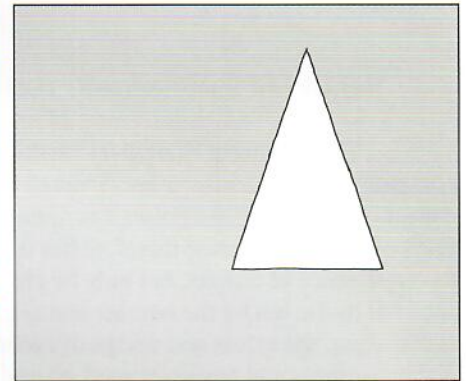
In this scene there is an obvious focus of attention: the tower.

Like the tree trunk in the landscape above, it is the first thing that is noticed. It gives a reference to the other parts of the scene: the foliage in the foreground, the flags on the building and the architectural details and embellishments.

A focal point helps us to instantly recognise a place and distinguish it from any other. If it is an historic building, so much the better.



Townscape with an obvious focal point



Visual analysis of townscape

Another view of the same tower provides a more typical example of a street scene.

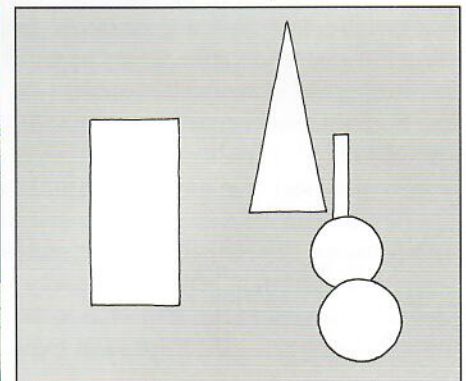
Although almost every structure, item or surface in the scene is well designed, the total view looks cluttered. It lacks a focus of attention.

The tower, monument, trees, and the plants in their container have as much impact on the scene as the advertisement sign, litter bin and rubbish in the foreground.

In most streets there is also the additional clutter caused by traffic equipment and signs.



Townscape with no obvious focus of attention



Visual analysis

In this street scene at Tinglev, Denmark the traffic sign at the centre of the road has been designed to be as simple and direct as possible, in order not to detract from the true focal point in the view: the church spire.

Although traffic signs have to be seen and recognised easily by drivers, they need not be the focus of everyone's attention.

The traffic signal housing, its post and push button are all of an uncluttered design visually co-ordinated with the paving at the refuge.

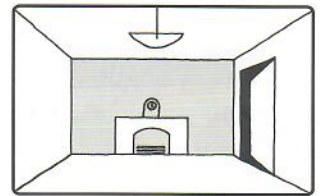
From a pedestrian's viewpoint it takes a visually subordinate role.

Examples of similar traffic signs are shown on pages 9 and 10.



Traffic sign at Tinglev designed not to distract the view down the village street to the church

SENSE OF SPACE



TOWNSCAPE CRITERIA 2

Some formal squares, town squares and streets have the feel of a huge outdoor 'room'. In these enclosed spaces you can go from one 'room' to another and sense the change in character.



An individual house

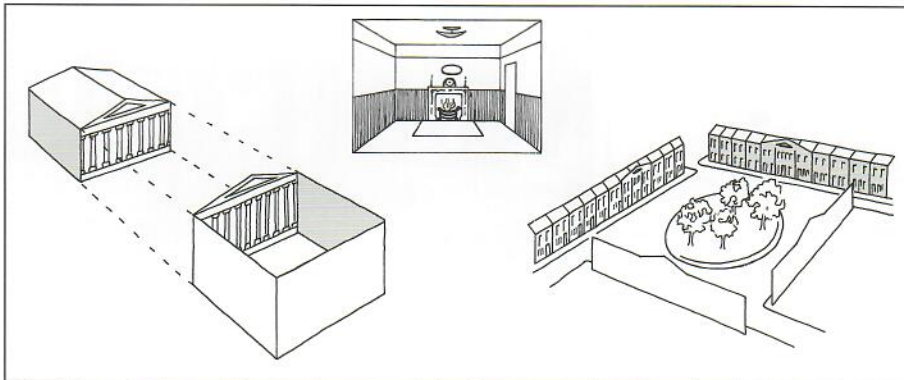


The house, forms part of a complete square, Fitzroy Square

Another concept to appreciate in a townscape is the awareness of outdoor space enclosed by buildings.

A building can usually be understood as an object which it is possible to walk around. The same building could also be part of a larger group which encloses a space and forms a square.

Enclosed spaces vary from narrow urban streets, to formally designed Georgian garden squares, to informal market town squares.



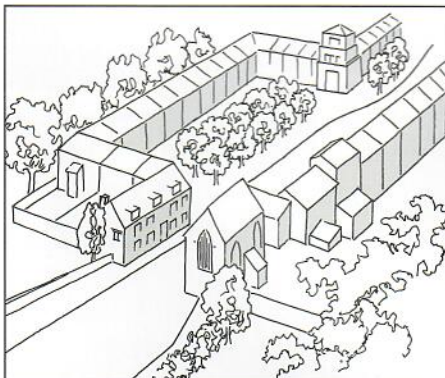
A building can be an object on its own and also be part of a larger enclosed space

It is far better to compare the variety and subtleties of enclosed spaces on foot.

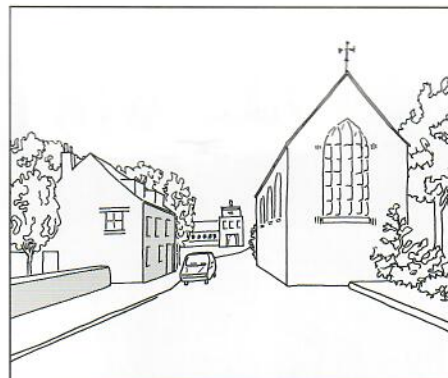
But drivers, though travelling much faster are conscious of the spaces they go through.

This awareness, and an impression of the way ahead, is derived from the position of surrounding buildings and landmarks.

It affects the way they drive and adds to the official instructions and information of traffic signs.



An enclosed square or complete village

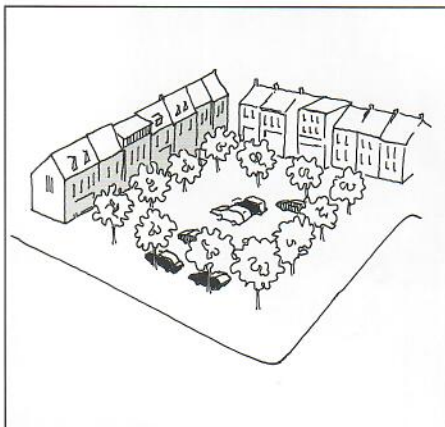


Entrance or gateway to a different place

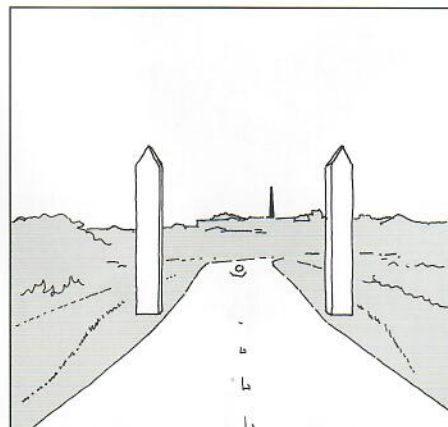
A town square may be an enlarged version of a formally designed square. A village street may give the impression of a long extended enclosed space or a series of huge rooms.

Each has a clearly understood entrance: a point where both pedestrians and drivers, though on a different time scale, feel they are leaving one place and entering another.

This means that the design of an enclosure and any new associated traffic measure can enhance visual quality and also help drivers approach safely and travel through the space ahead.



Car park seen almost as a town square

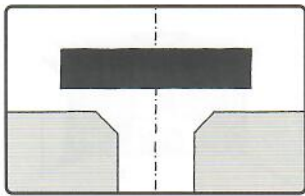


Gateway to emphasise a different place

Surface car parks for example can become pleasant places in their own right. Designed to respect the characteristics of a formal square they can provide a real sense of welcome at the point where a driver becomes a pedestrian (Bonn, page 16).

Similarly entrance gateways can be created to emphasise to drivers that they are entering a place where traffic is calmed and that their driving habits should change (Tinglev, Denmark, page 19).

Other examples of enclosed spaces both for pedestrians and drivers are at The Hague (page 12) and Lintorf, Germany (page 20).



FORMAL VISUAL ORDER

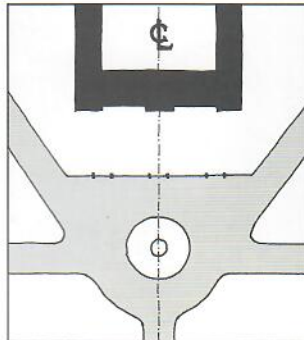
TOWNSCAPE CRITERIA 3

The simplest form of visual order is possibly a symmetrical arrangement or an axial plan. It can be seen in the formal relationship of The Mall to Buckingham Palace.

A third criteria for judging a townscape is the concept of a formal visual order. That is, a conscious and disciplined effort to avoid chaos and create order.

A typical example is the symmetrical arrangement of buildings, their components and the objects and spaces around them, on both sides of a central axis.

Often used to emphasise grandeur or formal military discipline, it can be seen in the relationship of classical buildings to their surrounding.



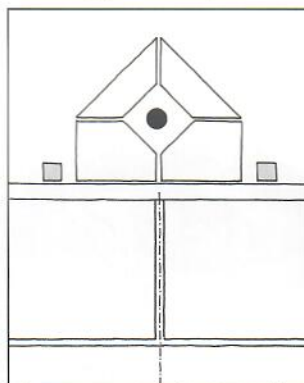
Formally positioned, The Mall



Symmetrical sentry-boxes at Buckingham Palace

At Dusseldorf, a symmetrical arrangement has been used to position an ordinary white line on a road in relation to an adjacent tree. Extraordinary care has been taken to paint the taxi rank bays in a shopping street on the same axis as an existing street tree.

The position of the tree grill, bollards and taxi rank road markings are co-ordinated. Prominence is given to the tree and there is a sense of visual order in the street.



The same principle. Dusseldorf taxi parking bays in relation to a tree and bollards



Similarly the position of a shop window and an entrance door is emphasised by motifs set into the paving at Schoonhoven.

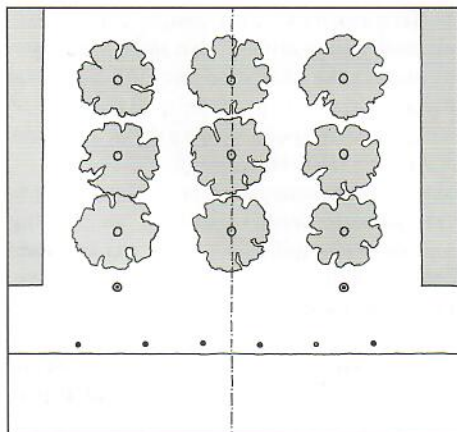
At Buxtehude, trees, lamp posts and bollards in a pedestrian priority street have been positioned symmetrically.

This provides a sense of order and also emphasises the change in traffic status of the street.

Other symmetrical layouts are show on page 13 and as part of a traffic calming device on page 21.

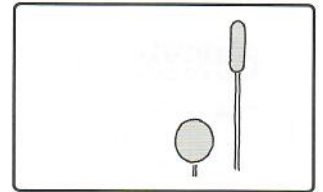


Pavement designs at Schoonhoven, Holland, relate to the centre of a shop front and entrance



Symmetrical layout in a pedestrian priority street, Buxtehude, Germany

INFORMAL VISUAL ORDER

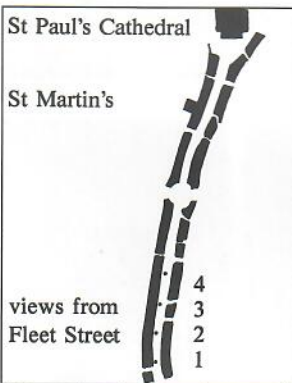


TOWNSCAPE CRITERIA 4

Informal visual relationships are more subtle than symmetry or axial plans but may have been designed with equal care.



Walk down Fleet Street and the spire of St Martin's, Ludgate appears to move across St Paul's



Viewpoints in Fleet Street offer glimpses of the dome

Sculptural order in the Mall

A fourth townscape criteria is the concept of intentional but informal order.

For instance Sir Christopher Wren intended people to notice that, as they walk down Fleet Street and see St Paul's Cathedral gradually coming into view, the dark spire of St Martin's in Ludgate Hill appears to pass in front of the light coloured dome. Observers will also notice the obvious stylistic similarities which link the two structures.

Although these well known views of St Paul's are often photographed and painted, visitors in the street have to make a conscious effort to look up and see the relationship. But discovering the subtleties can provide a deeper satisfaction and appreciation of the scene.

Dark sculptured lamp columns in The Mall continue the theme of colour and style on the bronze sculpture surround the statue of Queen Victoria. The white stone of the statue and plinth is similar to the colour and texture of the stone on the palace behind.



Traditional Dutch brick paving and walls



Lamp columns and bollards, equally spaced

At Schoonhoven, traditional Dutch brick paving on footways and carriageway match the colour and texture of the brick facades.

The brick is relieved on both building and road surface by similar courses of stone on the walls and kerbs.

The group of steel bollards at Lintorf, Germany are of a similar material, style and colour as the lamp columns. The columns are positioned so that they continue the spacing rhythm of the bollards.

The total effect provides an ordered but subtle background to the street scene.

Two example in Kolding, Denmark:

A robust stone bollard with metal attachments designed to complement an historic area.

The textured stone and rough textured metal reflect the surrounding stone road surface.

Finally a modern drainage grill is shaped in a shiny smooth metal as a piece of abstract art. The shape and surface continues the theme of the adjacent modern concrete paving material.

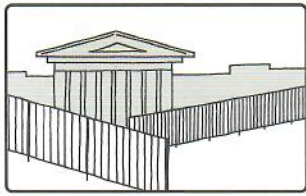


Rough textured stone on bollard and road



Modern grill complements concrete paving

The observant eye notes these informal visual relationships and looks for them in the more mundane equipment seen in every street. Other examples of informal visual order are shown on pages 9 and 23.



FOREGROUND DESIGN

ALTERNATIVES TO GUARD RAILS

To appreciate any townscape more fully, it is helpful to reduce foreground clutter such as guard rails, or obtrusive bollards. Here are some alternative ideas from Europe to consider.

Guard rails in Britain are intended to prevent pedestrians particularly children from straying onto roads. Their design normally follows a British Standard. Whilst some have an acknowledged function, they also add to the clutter in streets and detract from the true townscape focal point in a street scene.

It is interesting to examine European practice to see how alternatives are used:

- * Glass panel below horizontal rail. Usually seen as an extension to a glass bus shelter. A more sophisticated protection for bus passengers, Dusseldorf.
- * Low level spheres on a public pavement at the parliament building, The Hague.



Glass guard rail with bus shelter



Concrete spheres to deter pavement parking

Bollards are sometimes positioned to prevent vehicles breaking paving slabs or putting pedestrians at risk. Several alternative ideas are available which also reduce clutter:

- * Paving slabs strengthened with a base of insitu concrete. This is useful in areas where a specific paving pattern is needed.
- * Double kerbs or low walls. Suitable where there is room for a planted verge (page 17).
- * Simple round posts for rural or suburban residential areas.
- * Specially made steel posts to reflect a local theme or provide subtle humour.



Timber posts in a rural or park setting



Or something different

Finally an example from Lintorf, Germany.

- * Kerb-side verges at the town centre have been planted with low evergreen shrubs where there is sufficient width of pavement.

An equivalent signal controlled junction in Britain would probably have guard rails on every pavement. Guard rails are less necessary in Germany because pedestrians are required to have more respect towards drivers, and obey traffic signals.

A green verge treatment is often appropriate where a pavement is extended, and the road is narrowed to calm traffic (page 20).

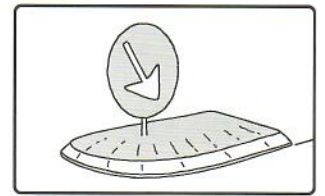
In each example on this page the foreground design is appropriate to the location and adds to the quality of townscape.

More examples are shown on pages 10 & 23.



Instead of guard rails, planted verges fit into the scene

ELEGANT EQUIPMENT



ILLUMINATED AND REFLECTIVE TRAFFIC SIGNS

The statutory 'keep left' sign often in an illuminated bollard is an item of traffic related street furniture which is particularly difficult to assimilate into townscape.



Commonly seen clutter of traffic equipment



Combined 'keep right', 'stop' and directions



Illuminated bollard, Zurich



Non-illuminated bollard in suburban Bonn



Unobtrusive reflective sign, Dusseldorf city centre

Most urban views in Britain have unsightly traffic equipment in the middle distance detracting from the qualities of townscape. It is easy to assume that the clutter of traffic related street furniture is almost unavoidable. A prime cause in Britain is that many of the items of equipment are erected by separate agencies at different times. Co-ordination is difficult.

The technical problems in Europe are very similar and there is progress in reducing clutter whilst retaining traffic functions. As an alternative to an illuminated bollard and several sign posts, the Swiss assemble a 'keep right', 'stop' and direction sign onto a single stainless steel post (Zurich).

This illuminated bollard also at Zurich has a straightforward uncluttered shape.

It benefits in this location by being positioned among landscaping.

On the left is another version from Germany. Although situated in an urban area, which in Britain would require an illuminated sign for this location, it is not illuminated.

Such non-illuminated signs add to the quality of townscape, especially in historic areas at night, by not drawing unnecessary attention to themselves. Yet the reflective surfaced signs are seen at night by drivers, when they are needed and so adequately fulfil their traffic function.

The street scene on the left is in the centre of Dusseldorf.

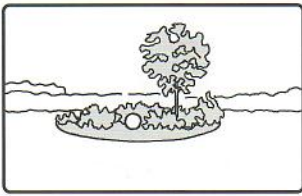
The traffic sign, which in Britain would have to be part of a far more bulky illuminated structure, has a reflective surface. A striped plate below the arrow is an additional reminder for drivers to keep to the right.

Both the sign and its support are seen by pedestrians as part of a tidy group.

Bollards, simply designed guard rails, street name signs, lamp columns and traffic signals are all co-ordinated.

Each piece of traffic equipment is designed to appear as restrained as possible and to be seen as the foreground, and therefore part, of a whole townscape composition.

Other examples of complete street scenes which include traffic signs with reflective surfaces are on pages 7 and 22.



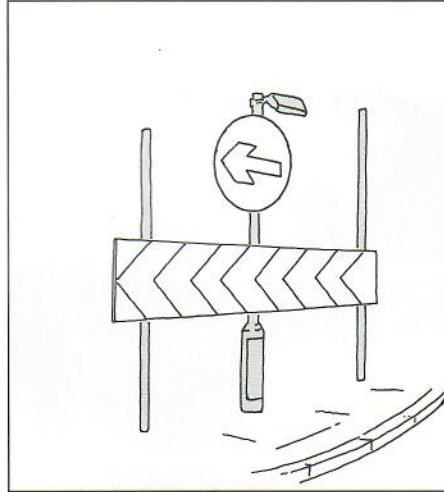
REDUCED CLUTTER

TRAFFIC SIGNS AT ROUNDABOUTS

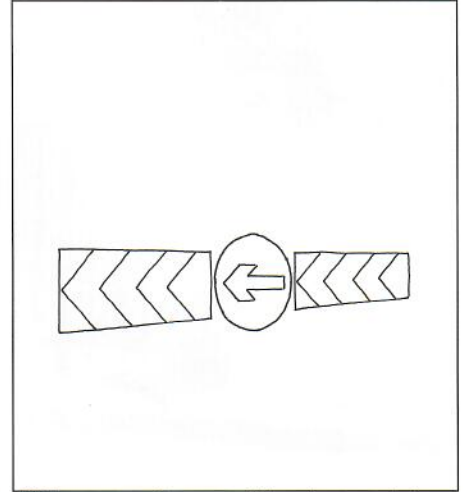
The need to allow traffic sufficient room to weave and manoeuvre at a roundabout creates a townscape feature in its own right that often gives the impression of an open space.

Roundabouts, as a traffic measure seem to be far more common in the UK than in Europe. They provide an opportunity to develop their townscape characteristic of a visual open space as an amenity asset to a locality. So much the better if each roundabout can be easily distinguished from others by for instance, a landscape or sculptural feature. In either case the traffic signs on the roundabout should fulfil their traffic function but ought not to detract from the visual quality of the space.

The left hand sketch shows a typical British 'turn left' and chevron sign assembly. The sketch on the right shows the actual requirements of the traffic signs regulations.



Typical collection of equipment



Minimum requirement of the sign regulations

On pages 4 and 9 we show some examples of European traffic signs, assembled with the minimum of clutter.

As part of this study a series of simply designed illuminated sign fixings have been developed.

Despite the need for greater use of reflective signs, there will always be locations where illuminated signs are essential.

The assembly shown here comprises a simple tube support which can be used for both non-illuminated and illuminated signs without the need for unsightly wide based posts to house switches.



Neater sign and support, made possible by a newly developed narrow switch

The prototypes required the development of a new range of narrow switch mechanisms acceptable to the British standards and safety practices, for use with PVC, SWA mains cable up to 16 mm, as well as a double pole fuse.

This is an example of European concepts of elegant design in every day equipment being adopted in Britain.

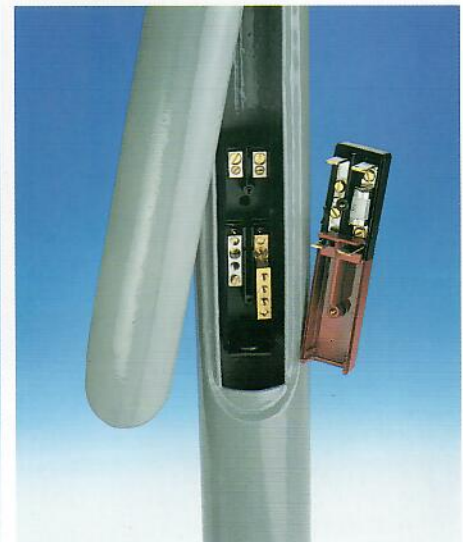
The availability of narrow switches to meet British standards now provides opportunities to reduce street equipment clutter.

Other prototypes are being developed.

Whilst maintaining their essential traffic function, many sign structures should, from a pedestrian's viewpoint, be less obtrusive and take a visually subordinate role.

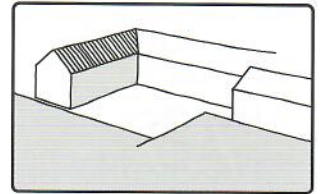


Electrical supply is within a narrow post



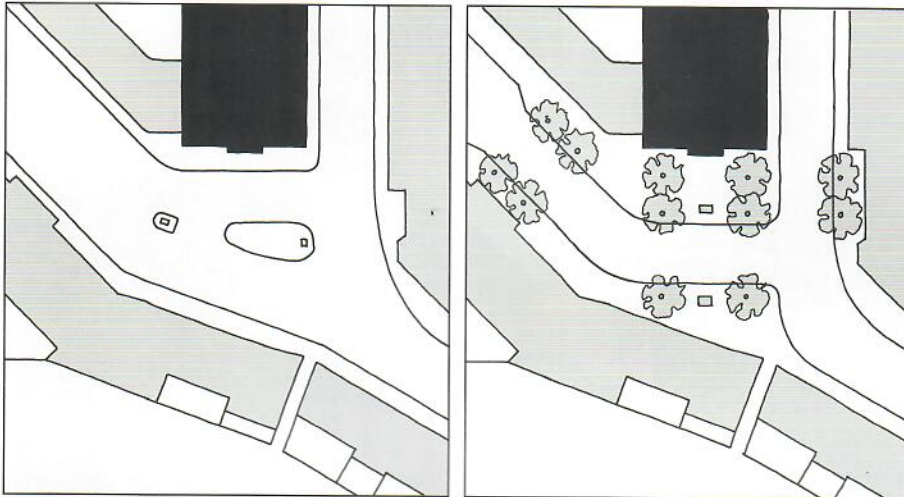
The specially developed narrow switch

ENCLOSURE OF SPACE



ROAD ALIGNMENT

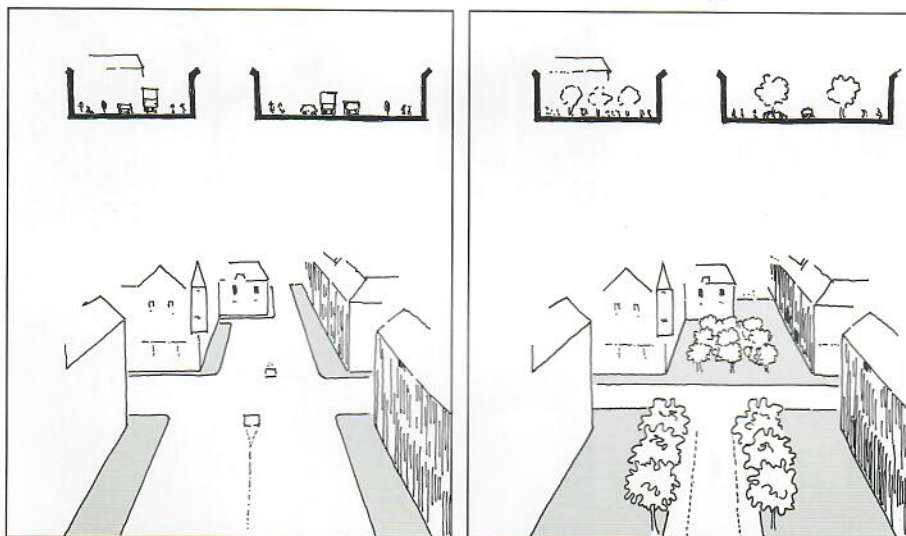
The sketches here show how the townscape characteristics of a space between buildings can be accentuated by the alignment and details of the carriageway running through it.



Enclosed space in front of an important building is accentuated when traffic is calmed

Streets are seldom made up of two parallel lines of buildings. There are usually changes of direction or variations in the distance between buildings and the centre of the road. This gives a street its townscape character. The sketches show how a scheme to calm traffic can also give greater prominence to an important building, by the design of structures, landscape and paving in the area in front of it. Thus a building which in this case helps form the visual character of a town, is given more emphasis and the town's unique characteristics are strengthened.

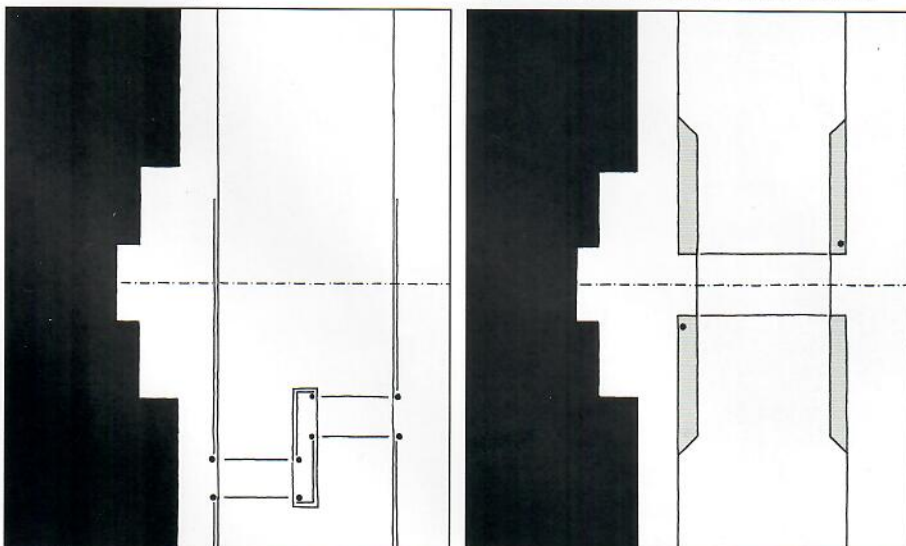
These sketches show how two streets at the centre of Buxtehude were incorporated into a traffic calming scheme. The individual townscape characteristics of both streets were accentuated. Contrasts between the size of the spaces enclosed by the buildings of both streets was emphasised. The narrow street was converted for use by pedestrians and treated like an outdoor 'room'. The wider street was made to appear like a town square with trees, planting and textured surfaced car parking spaces. The two streets were finished differently and changes in designs occur at the exact place where pedestrians leave one enclosed space and enter another. More details of each are shown on pages 6 and 15.



Two streets with different characteristics

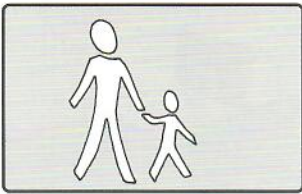
Differences accentuated in traffic calming

As a further development of the concept, these sketches show how a pedestrian crossing can be positioned to accentuate the space formed by part of a building set back from the street. Planted verges are also indicated as an alternatives to guard rails, to reduce street clutter and give greater prominence to the building. In addition, signals and control buttons are reduced to the minimum required for safety. Examples of signal controlled crossings in Denmark and Germany, that have no guard rails, are shown on pages 4 and 23. An example of a traffic calming device in Germany which respects the enclosure of space is shown on page 20.



Double pedestrian crossing and refuge

Single crossing accentuates set back building



PEDESTRIAN PRIORITY

THE OUTDOOR 'ROOM'

Outdoor 'rooms' can be appreciated more fully by pedestrians in places where they have priority over vehicles. That is, in areas where vehicles are required to give way to pedestrians.

Although the ultimate outdoor 'room' may be one which is totally traffic free, in many places it is not practical to exclude vehicles entirely. A sensible compromise is needed. This adult and child sign is used throughout much of Europe to indicate pedestrian zones. In Denmark for example, areas where pedestrians have priority over vehicles and speeds are restricted to 15 km/h, have been lawful since 1976. Such speed limits gives drivers more time to notice traffic signs, and allows them to be positioned less obtrusively. Pedestrian priority zones are particularly applicable in places such as historic town centres where some essential vehicles are needed and all traffic cannot be removed.

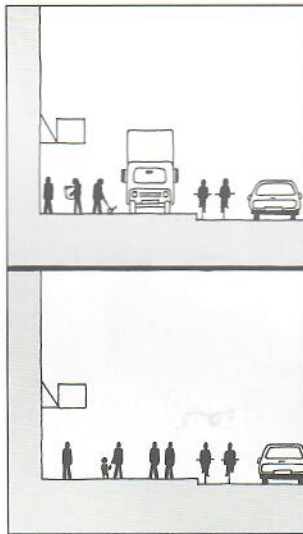


Pedestrian priority area, The Hague



Pedestrian priority area, Buxtehude

In Amsterdam, a pavement, the traditional pedestrian priority area, is widened and used by service vehicles for a few hours each day. There is a speed limit and the rules of priority for pedestrians apply in the same way as on a normal pavement. Service vehicles do not block the cycle routes and local wardens ensure that they leave the pavement on time. Unlike a loading bay in the carriageway, off-loading space on the pavement can otherwise be used by pedestrians. The arrangement would seem appropriate for shopping streets where there is no other service access.



Service pavement, central Amsterdam, can be used by pedestrians during most of the day

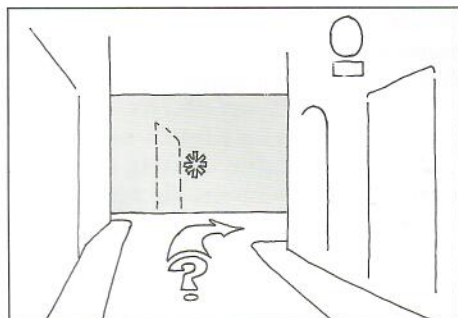
Pedestrian priority zones allow people to walk safely and appreciate the quality of local townscape. It might, as here at The Hague, have all the characteristics of an outdoor 'room'.



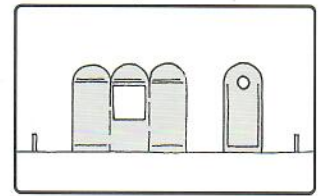
Pedestrian zone, outdoor 'room', The Hague



Bollards lower into ground at the zone edge



STREET FURNITURE



FURNISHING THE OUTDOOR 'ROOM'

Street furniture, like room furniture, should be selected and placed with care. A few items are attractive enough to accentuate. Most are best merged into a visually subordinate role.



One of a pair of symmetrically placed boxes



Modern bus shelter with phone box

Street furniture in Britain is the responsibility of several agencies so co-ordinated choice and location is difficult.

However the siting and appearance of phone boxes can now be controlled through the General Development Order of the town and country planning acts.

These illustrations show how phone boxes can make a positive contribution to townscape.

Because the colour of traditional red boxes is so strong, they need to be positioned, as in this example, almost formally in relation to their surroundings.

Alternatively a transparent phone box and bus shelter can be put almost anywhere without vying with the focus of a scene or detracting from an overall townscape composition.



Lamp column, Amsterdam



Co-ordinated newsvendors kiosk, phone box and bollards

There are similar limitations of choice in Europe. Two examples here show interesting innovation:

* Amsterdam. Lamp columns in a main street are designed to match the style and motifs of a nearby building.

* Dusseldorf. The appearance of kiosks, phone boxes, lamp columns and bollards have been designed to a uniform theme in order to create a prestigious style in a central area shopping street.

Such co-ordination is not easy to carry out. It is often difficult of find a design which complements the varied styles of buildings along a single street.

A more successful approach is to simplify the appearance of each item so that it takes a visually subordinate role in the streetscene.

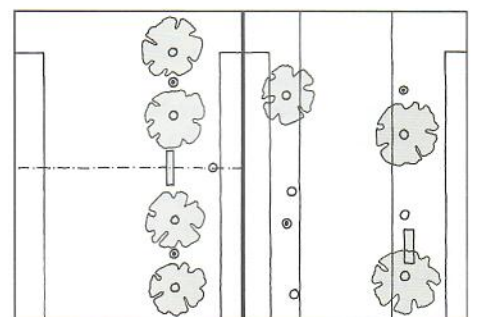


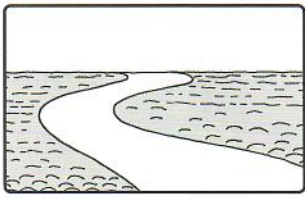
Kindergarten fence, Dusseldorf



Street furniture sculpture, Kolding, Denmark

A boundary fence of a kindergarten clearly states the likelihood of children near the road and reinforces statutory warning signs. Finally, street trees, lamps columns, bench and bin in Kolding, uniformly designed and orderly positioned like a suite of furniture in a room.





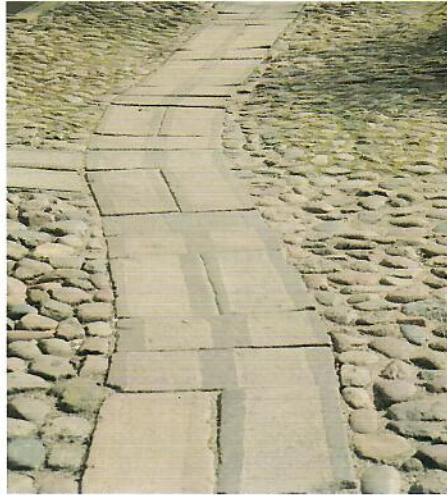
SURFACE TEXTURE

FOOTWAY PAVING

The surface texture or pattern of paving for pedestrians is like a carpet in a room. It should relate either to the adjoining vertical building surfaces or be a neutral setting for several buildings.

Every locality has a variety of paving textures to notice and possibly appreciate. The most visually successful, do not impose arbitrary designs, but follow local traditions in materials and patterns as well as appropriate locations and uses.

At Kolding, a smooth walking surface traces a path through a historic backwater. Its lines gently curved through the cobbled courtyard and are an invitation to follow. The design of the paving complements a local and historic townscape characteristic.



A pedestrian footpath winds across a court. Texture helps trace the route, Kolding, Denmark.

In this pedestrian priority street at Buxtehude, the footway paving at each shop forecourt has been designed to appear to extend the premises out to the area in front of the shop.

The design of each forecourt is different in order to respect the appearance of its own shop front. But the paving materials for the whole street are uniform.

Cycle racks, street trees, flag poles, electrical service boxes, show cases, litter bins and lamp posts have all been positioned in relation to individual forecourt paving patterns.

The whole street can be seen on page 12.



Footway paving and street furniture relates to each shop front, Buxtehude, Germany

This simple paving texture in a pedestrian priority street at The Hague does not attempt to relate to any particular building. Instead it visually binds them all together. Facade texture is continued at ground level.

Traditional local paving is repeated in one overall material which extends across the whole width of the carriageway area and pavement.

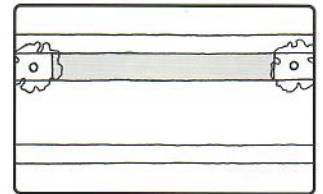
There are no additional decorative patterns. At the time of the study, previously laid inappropriate patterns were being replaced with this more unified design.

Although vehicles are virtually excluded, the original proportion of pavement width to road width has been kept, as frequently recommended for historic areas in Britain by English Heritage.



A neutral design allows the buildings to remain visually dominant, The Hague

SURFACE TEXTURE



CARRIAGEWAY PAVING

Different carriageway textures help drivers find their way about. Textures can indicate where to park, where to drive and what speed is expected.

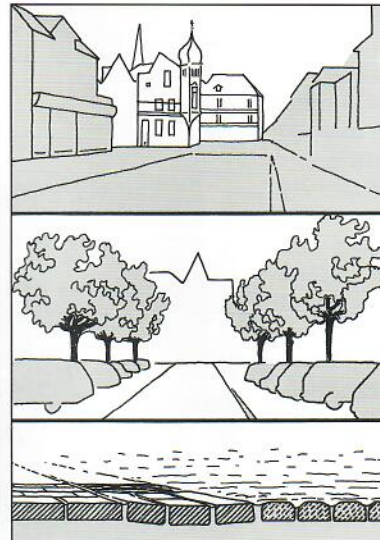


Surface for vehicles indicated by a subtle texture change and equally spaced bollards



Setts mark parking bays, Gouda, Holland

Changes in texture, Buxtehude, Germany



Street with parking Buxtehude, Germany

In this typically Dutch historic town of Schoonhoven, the surface intended for vehicles is defined by a subtle change in carriageway texture compared with the area for pedestrians.

Vehicles are prevented from entering the pedestrian area by trees, within kerbs, and bollards spaced equally between them.

All the ground textures relate in colour and scale to the brick walls of the historic buildings.

Coloured setts at Gouda, Holland, mark the position of parking places. They are formally positioned in relation to trees.

At Buxtehude, carriageway surfaces for moving and parked vehicles are indicated by changes in texture and location rather than by road line markings.

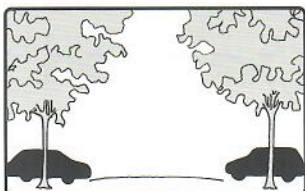
The main carriageway has diagonally laid setts. Parking bays have narrow tiles in a rectangular pattern within a sett edging.

The footway continues the same colour theme and maintains the width and proportion of the original pavement.

Materials, layout design and workmanship are all of a high quality.

Carriageway texture at Buxtehude acts as part of a traffic calming measure:

- * The carriageway changes to a pedestrian priority zone at the focal point of the view, and where the buildings form a separate enclosed space.
- * Street trees are positioned to give the impression of a town square.
- * Carriageway texture shows where to park.
- * Setts at the edge of the carriageway form a gutter and keep vehicles away from the kerb.



OFF-STREET PARKING

PEDESTRIAN'S ENTRANCE TO A TOWN

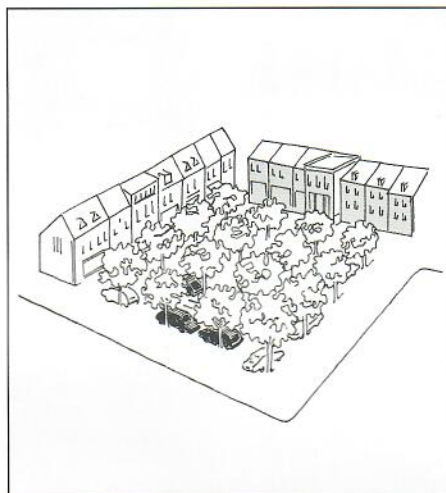
Car parks are where drivers leave their cars, and become pedestrians. They see their surroundings through new eyes.

Surface car parks, though often reused scraps of left-over land, do have the potential to add character to a town and contribute to its townscape individuality.

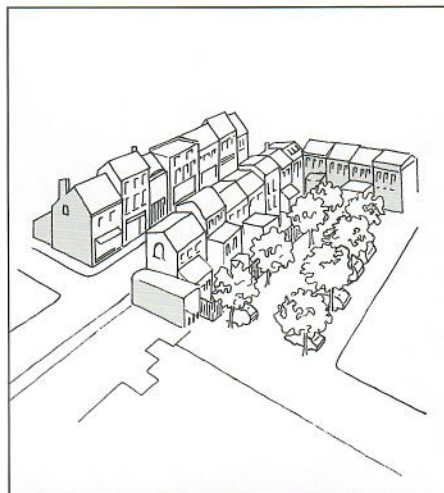
There might be scope to create the feel of a tree canopied town square, as on page 15, or alternatively an outdoor 'room' possibly just off a high street.

At a town centre, car parks are the places where drivers become pedestrians and look at a town from a fresh viewpoint.

A high level of visual awareness is needed to design the immediately visible details.



Car park forming a town square



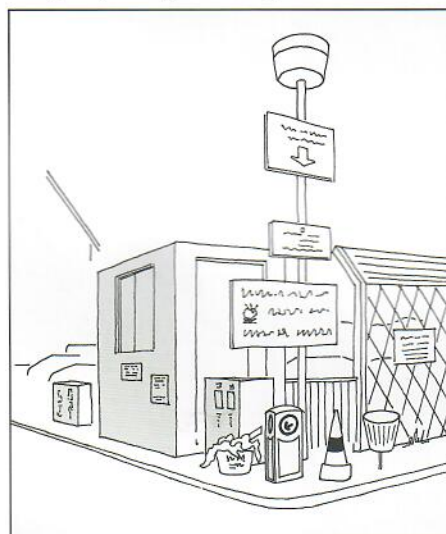
A new outdoor 'room' behind a high street

We are used to seeing a car park entrance as an unsightly collection of barriers, gates, oddly coloured boxes, fences and notices.

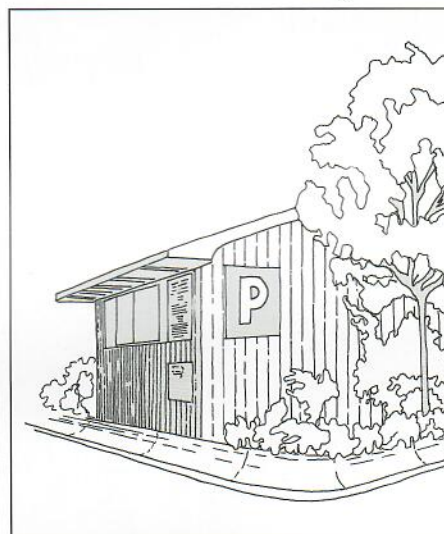
The sketches on the right give some idea of how the essential car park equipment can be combined with landscape to provide a more tidy composition.

This study noted nothing in Europe that improved on the best private car parks in the UK. But the generality of public car parks continued a visual quality of design and co-ordination that was apparent in traffic calming schemes.

Towns can certainly be enhanced by tidy, well treed car parks that respect the basic townscape criteria.



Clutter at a typical car park entrance



Possible co-ordination at the same entrance

Two examples of the entrances to German car parks, in a city centre and suburb:

To reach the entrance of a multi-storey car park, drivers are required to go through a traffic calming device. They slow down to cross the pedestrian priority surface of a footway.

Barriers, boxes and notices are discretely positioned inside the building.

The second example is in a suburban park setting. To enter, drivers are again required to slow and go over a textured surface of setts positioned between well protected trees and landscape.

Both have been designed to fit unobtrusively into the street scene.

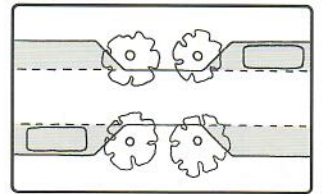


Entrance to an urban car park, Dusseldorf



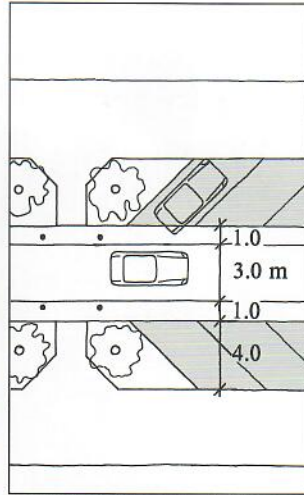
Entrance to a surface car park, Bonn

ON-STREET PARKING



PROVIDING LOCAL INTEREST

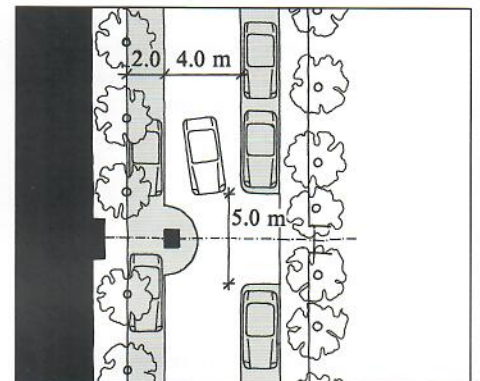
Rather than being considered an intrusion into the street scene, on-street car parking can enhance townscape characteristics



On-street parking, traffic calming and landscape enhance townscape at Buxtehude, Germany



Repositioned historic monument defines on-street parking and calms traffic. Bonn.



In a Bonn inner city residential area, a stone monument with areas for on-street parking have been used as a traffic calming measure. The stone and parking places are positioned symmetrically opposite a park entrance.



Rocks protect landscaped areas from damage by vehicles



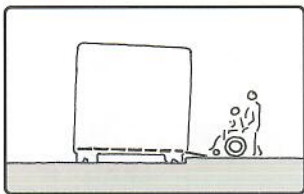
Double height kerb

Various robust devices are used to protect pedestrian areas or landscape from moving or parking vehicles.

At Buxtehude large rocks deter the most untameable off-the-road vehicle.

Setts denote the area for moving vehicles and tiles indicate where parking is permitted. Double height kerbs serve the same purpose and prevent unauthorised parking.

In each of the three examples cars are allowed to park on the carriageway, but only in limited numbers, and in locations chosen after considering pedestrian safety and townscape criteria.



LOW FLOOR BUS

EXPERIMENT AND DEVELOPMENT

Widened pavements allow wheelchair users direct access to low floor buses. Passenger friendly buses encourage greater use of public transport to the benefit of urban quality and townscape.

Two ideas to help people with disabilities:

* Linear guidance channels in Holland are for people who use long sticks. This is in addition to tactile surfaces at road crossings.

The presence of advertisement signs and even bicycles parked across the guides suggests their purpose is not yet fully understood.

* Low floor buses allow easier access for wheelchair users or people who cannot manage steps.

It is often also desirable to raise and extend footways at bus stops. There are opportunities to design these pavements to be integrated into the townscape. They can be combined with traffic calming devices and on-street parking spaces in a variation of the scheme shown at the top of page 17.



Guidance channels are not fully understood

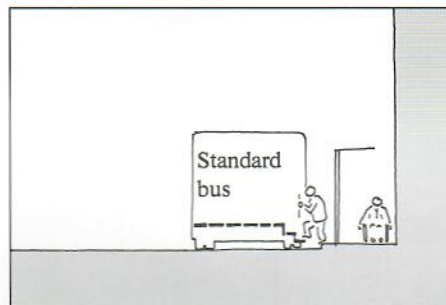


Easier access to a low floor bus, Hamburg

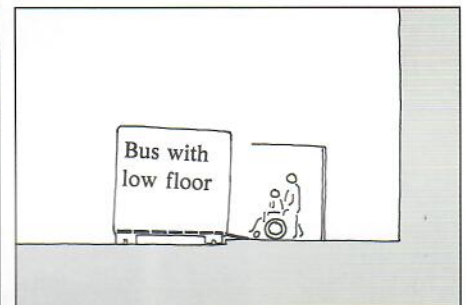
Low floor buses are seen in many European countries and are now appearing in London.

The bus has a flat level floor 320 mm above road level. A tilt or 'kneeling' suspension system enables the floor to be lowered at the doorway to 240 mm.

There is no step and a power operated ramp bridges the horizontal and vertical gap between the bus floor and the kerb.



Three steps into a standard bus



Bus tilts and ramp extends at bus stop

Bus drivers have difficulty in stopping close to a pavement. Cars are often incorrectly parked in bus bays. In fact the bays are usually designed to remove stationary buses from traffic lanes, rather than ease bus movement. Even on roads without bus bays, parked cars often prevent buses stopping parallel to the kerb.

A widened pavement at a bus stop allows buses to stop at the kerb without moving out of the traffic stream.

The kerb is raised from a height of 110 - 120 to 160 - 180 mm.

Some European cities are experimenting with moulded kerbs that guide bus wheels to the correct position against the pavement.

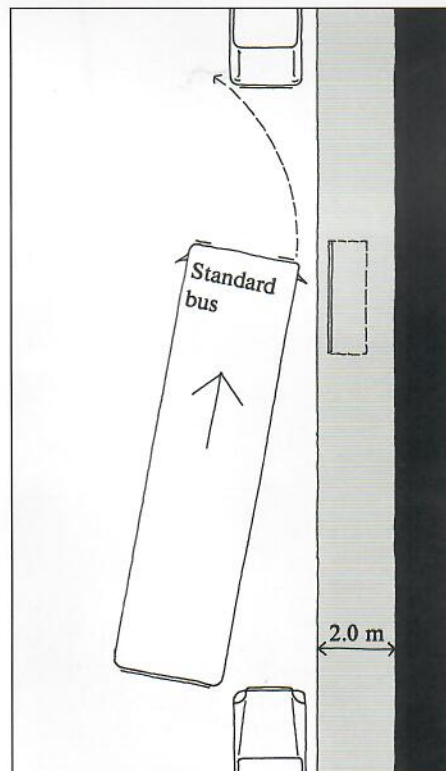
Allowing buses to stop in a traffic stream creates an additional traffic calming device. The whole concept provides a more passenger friendly service, encourages greater use of public transport and at the same time reduces private car journeys in what is known in Germany as 'PUSH - PULL'.

For more information please contact:

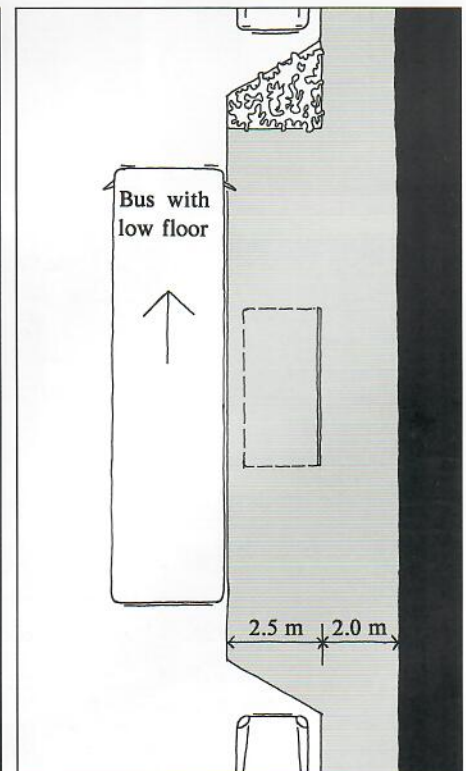
Unit for Disabled Passengers

London Transport, 55 Broadway, SW1H 0BD

Telephone 071 918 3176

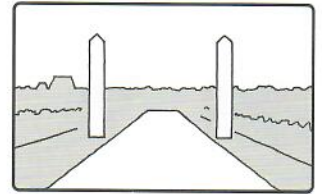


Driver can not always stop close to pavement



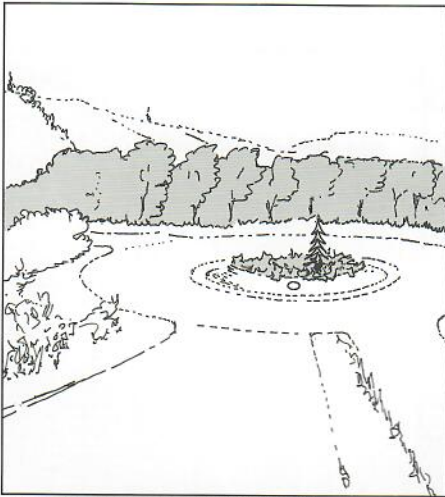
Wider pavement allows bus to stop parallel

GATEWAYS

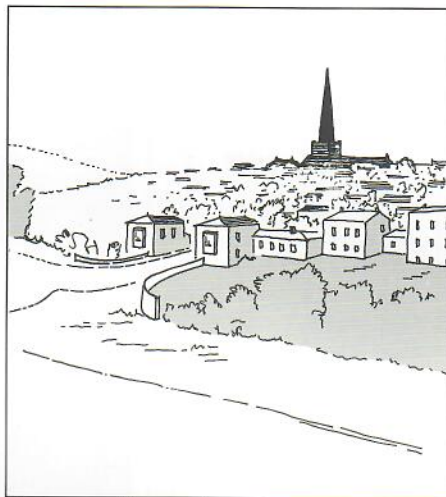


USING EXISTING TOWNSCAPE

Changes in townscape characteristics along a road help drivers know what to expect ahead. For instance a gateway at the point where drivers leave a roundabout and enter a village.



Spacious roundabout leading to:



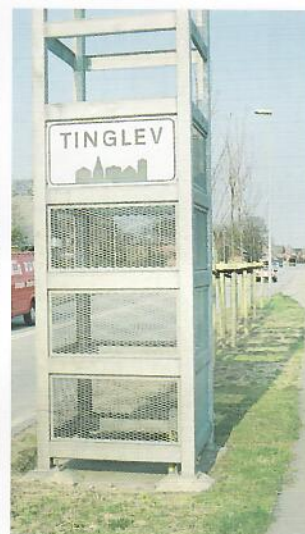
A narrow village entrance

A town is recognised by its townscape. The quality of buildings and the spaces and landscape between them help to create a town's identity.

Traffic calming and management relies on drivers being aware of what is expected of them and the nature of the road ahead. Where traffic calming measures require a pinch point, a chicane or a gateway, they can each be positioned and designed to incorporate existing townscape features. Here we show how gateways can emphasise to drivers that they are about to leave one place, for instance a spacious roundabout, and enter another, possibly a narrow village street. Consequently a different style of driving is required.



Tinglev, Denmark, a gateway warns of the village ahead



Cyclists pass on the path side

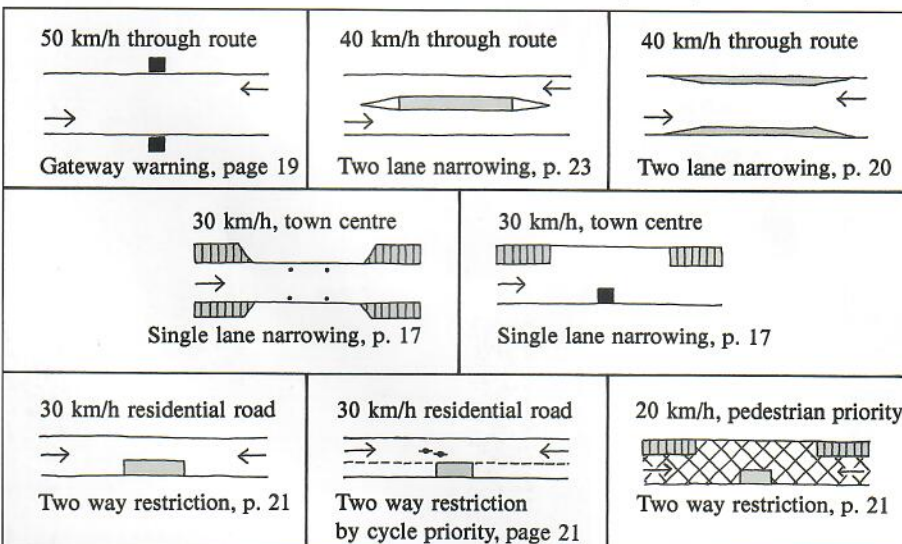
At Tinglev, a village on a through highway, gateway pillars have been positioned at its entrance. Daily traffic flows of 3,900 vehicles per 24 hours have not been reduced but there is a 50 km/h speed limit.

The pillars are only intended to be a visual warning rather than a physical restriction but are positioned where the first houses in the village can be seen and where a village church spire comes into view.

Thus the townscape characteristics reinforce the gateway warning.

Some fifty metres beyond, the carriageway is narrowed to calm traffic. Other speed reducers are spaced regularly along the village street.

One is shown on page 4.



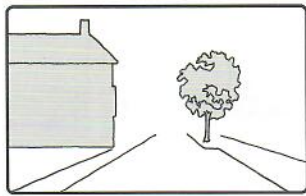
Gateways can lead to a series of traffic calming devices. These are illustrated on other pages

Gateways warn that road conditions are about to change and that drivers can expect some more traffic calming devices.

The Danish Road Directorate considers that there is a relationship between desired speed and the spacing of speed reducers:

Desired speed	Spacing of speed reducers
50 km/h	250 m
40 km/h	150 m
30 km/h	75 m
10-20 km/h	25 m (max.55m)

The diagrams on the left are a key to the European speed reducing devices on other pages. Each is designed to enhance and be assisted by local townscape characteristics.

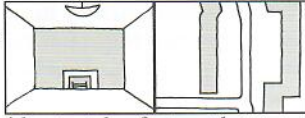


CALMED TOWN CENTRE

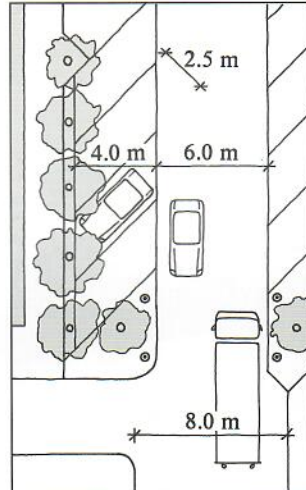
TOWNSCAPE IN TRAFFIC CALMING MEASURES

Three townscape characteristics along a town centre street have been used to give emphasis to traffic calming measures.

ENCLOSURE OF SPACE



A relatively wide stretch of street between well set back shops has been narrowed and the space used to provide angled on-street car parking along both sides. The two rows of shops form an enclosure to the street. To accentuate the sense of enclosed space, groups of trees have been planted at crossing places, and in the landscaped areas behind and at the end of each row of parked cars. Drivers have the impression of going into an area of heightened activity where vehicles will manoeuvre and pedestrians cross.

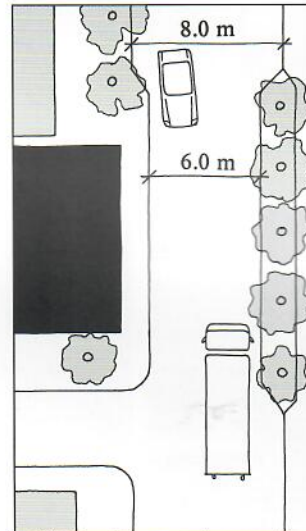


Wide space between shops to provide on-street parking. Trees emphasise enclosure

PINCH POINT

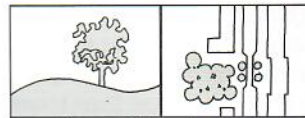


A carriageway pinch point has been formed at the place where an older building stands forward. The building's position is the sort of townscape feature that gives a place identity and distinguishes one town from another. The restriction is emphasised for drivers by additional landscaping opposite and by the details of the footway and cycle path paving. Access into the side road has also been restricted and the space on the newly widened pavement used for a specimen tree in a stylised tree grill. Bollards to prevent pavement parking and all other street furniture are visually co-ordinated.

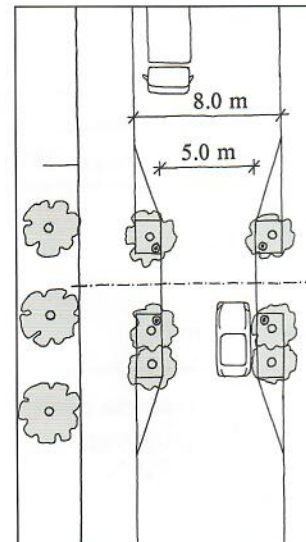


Older building set forward is used to mark the position of a pinch point

GREEN LINK



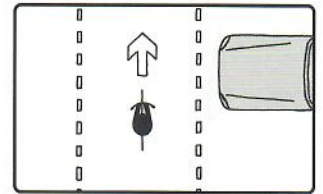
A green link across the road has been created by placing a two-way carriageway restriction, with a pedestrian crossing, where there is an open space and pedestrians would naturally want to cross the road. Trees warning drivers of the restriction also continue the landscape theme of the adjacent open space. Lamp columns are positioned at each corner of the crossing place. Carriageway geometry, street furniture, hard and soft landscape are all co-ordinated into a simple regular symmetrically planned design.



Trees at a carriageway restriction crossing place continue the green of adjacent open space

All three examples are at Lintorf, Germany

CALMED RESIDENTIAL AREAS

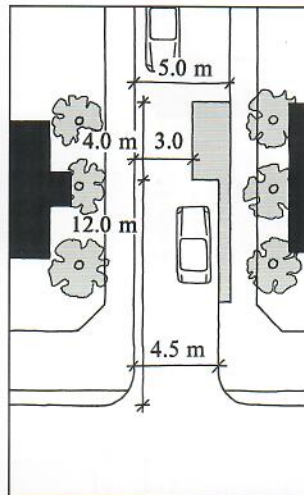


TRAFFIC CALMING IN TOWNSCAPE

Measures to persuade drivers to reduce speed are incorporated into the existing townscape features.



Entrance to 30 kp/h zone, Buxtehude. Landscape at restriction continues green from gardens



Some European 30 kp/h zones have been in use for a decade.

Here the entrance to a zone at Buxtehude is positioned at a point where a suburban residential road joins a secondary traffic route.

A carriageway narrowing is set back from the junction and is designed so that it appears to be a visual extension to the planting in the back gardens of the corner houses.

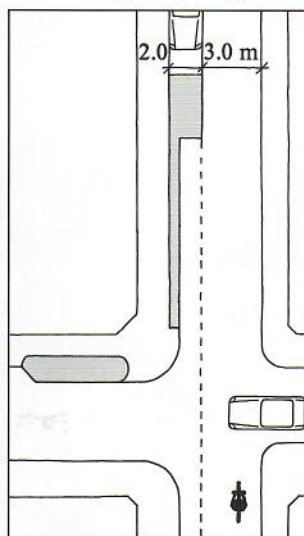
Although the road is two way, there is only room for one vehicle to pass.

The restriction is in the direct path of vehicles entering the zone but set back ten metres from the main road to allow drivers entering to stop safely.

There are no warning signs apart from the 30 kp/h signs at the entrance to the zone.



Traffic calming by cycle path. Drivers give way to cyclists.



Cycle paths go to town centre

Within the same zone some roads have been converted exclusively for cycle use, except for vehicle access.

The cycle path forms a direct route to other residential areas, the town centre and railway station. Cycling has increased by one third.

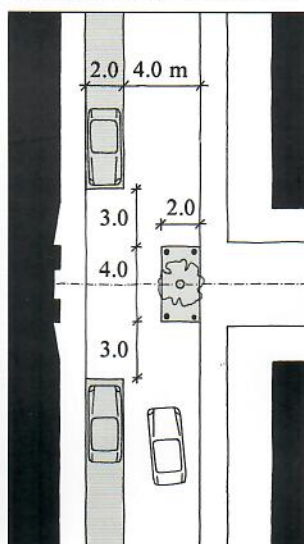
Here again planting is similar in scale to adjacent shrubs in the suburban gardens. Road-side verge planting widens to create pinch points restricting the road to the width of the cycle path. It also defines areas for on-street parking.

No additional signs warn of each restriction. At the cross roads, drivers are careful to give way to cyclists.

The form and detailed design of each traffic measure takes its cue from the townscape characteristic of the particular location.

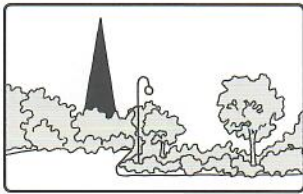


Pedestrian priority zone with symmetrically planned raised surface, landscaped at restriction



A new shared surface zone at Bonn brings together a number of townscape criteria:

- * New planting has been designed to relate formally to the building entrance across the road on the left.
- * The raised carriageway has a surface pattern with varied textures to encourage low speed and accentuate the narrowing at the tree. Colours and patterns are restrained to allow the historic building on the left to continue to dominate the street scene.
- * On-street parking is used to create additional barriers to moving vehicles and conforms to the formal symmetrical plan.
- * The existing footways have been retained for use as smooth surfaced cycle routes.



DRAWING IT TOGETHER

TOWNSCAPE

Several townscape criteria have been respected in calming the shopping street traffic in the small German town of Lintorf.

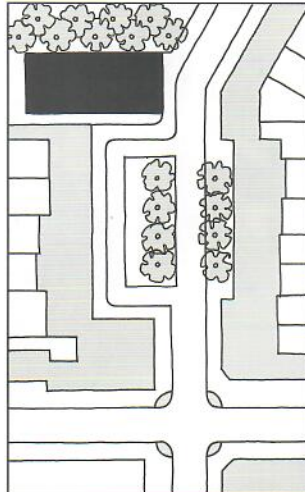
The social and visual dominance of the church spire has been retained and enhanced as the focal point of the scene.

In the foreground at the signal controlled road junction, street furniture clutter has been reduced to a minimum. There is additional landscape at the kerb.

Paving textures and colours are restrained. There are no imposed artificial patterns. Instead a neutral uniformity binds the scene together.

Further away, new trees at the side of the road extend the areas of existing trees near the church without obscuring the church spire.

Car parking, on and off the street is contained within soft landscaping and trees.



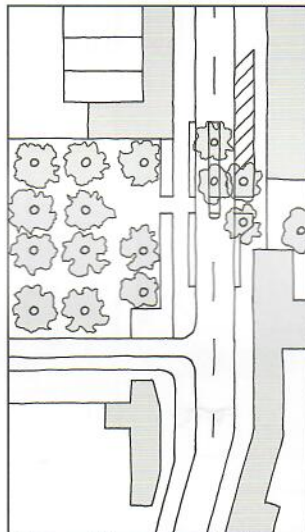
The church spire, the social and visual focus of the scene is not obscured by street clutter

A narrowing of both carriageways marks the entrance to a traffic calmed town centre and is combined with a place where people can cross.

The crossing, positioned where vehicles are required to reduce speed, leads directly from the pedestrian entrance of an edge of town centre car park.

New planting at the crossing complements the existing landscape surrounding a car park and directs pedestrians precisely to a safe crossing place.

Street furniture is minimal. A telephone is discretely placed at the car park.



The road is narrowed where pedestrians need to cross the road from a car park

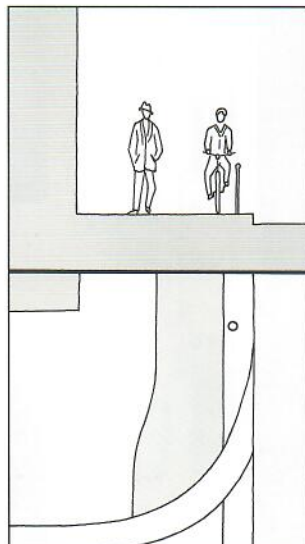
The shopping street does not have particularly distinguished or historic buildings. It does however have the townscape characteristic reminiscent of an informal village street.

Shops are not set along a uniform building line but at places follow an undulating curve.

The traffic calmed carriageway accentuates this feel of an irregular village high street. It moves across the space between the two lines of buildings and allows room for on-street parking and landscaping.

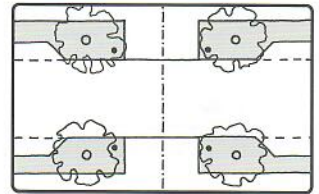
Bollards placed to protect cyclists at a place where an old building juts into the road give a visual emphasis to an interesting local landmark (see also page 20).

Footway and cycle path paving pattern is precisely set out to give further emphasis to the variety in width along the street. Paving blocks are positioned with precision.



Paving details accentuate the interesting variations in width between buildings

DRAWING IT TOGETHER

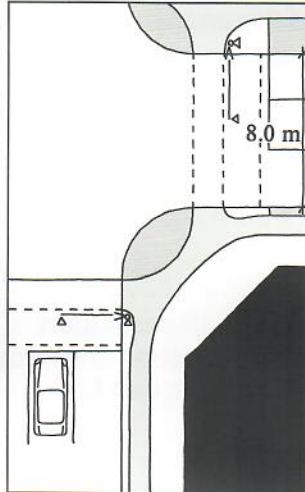


PRECISION ENGINEERING

Concern for traffic efficiency and safety leads to precise implementation of engineering principles.



At the intersection, all traffic related street furniture conforms to a uniform design and colour



Cycle paths next to each footway continue across the roads parallel to the controlled pedestrian crossings.

Street furniture is co-ordinated and clutter reduced. Street lighting columns, traffic signal posts and where required bollards, conform to an overall uniform design and colour.

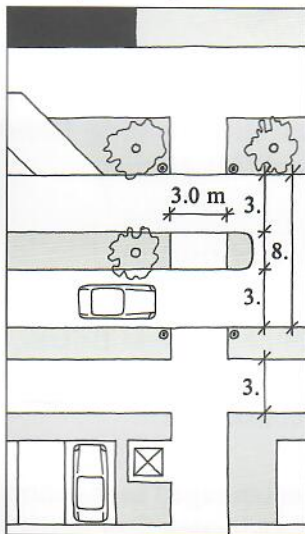
Pedestrian control push buttons are fixed to signal posts, not to separate posts.

All are positioned precisely in relation to each other and to the landscaping at the corner of each footway, which fulfils the function of guard rails.

On the spot fines for disregarding signals encourage pedestrians and cyclists to wait for the green light, even if they think it is safe.



Precise symmetrical layout at a pedestrian crossing combined with a carriageway narrowing



The carriageway is reduced at the narrowing from eight to a total of six metres, allowing a two metre pedestrian refuge.

Kerb-side planting instead of guard rails guide pedestrians to the ramps at the crossing.

Trees in the landscape areas are also placed axially and link with adjacent planting.

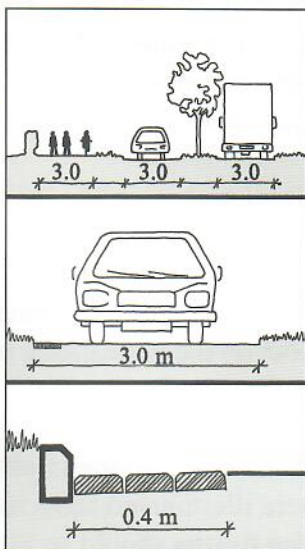
At the crossing place, a gutter rumble strip to warn drivers that they are nearing the kerb is discontinued.

Four lamp columns, one at each corner of the crossing are positioned symmetrically where they are needed.

The statutory signs warning drivers to keep to the right, are of a reflective material set in an unobtrusive frame.



Carriageway surface texture to encourage safe driving is co-ordinated with footway crossing



0.4 metres of textured paving at the gutter keep vehicles away from the kerb.

Footway paving is functional without drawing too much attention away from the main visual attractions in the area and contributes to the overall effect.

The traffic measures at the town centre give the impression of being a co-ordination of several areas of concern:

- * Traffic management
- * Traffic calming
- * Pedestrian safety
- * Townscape, that is visual order
- * Landscape
- * Tidiness
- * Attention to detail

The town is by no means unique.

A co-ordinated approach follows official national guidelines.

CONCLUSIONS

PHILOSOPHY OF INTEGRATION

This study has brought together a number of inter-related ideas from Europe and presents them in an immediately useful form.

It has been compiled as a result of specially arranged inspections at each site, accompanied by interviews with engineers, designers, landscape architects and managers in each country.

From these as well as from informal conversations and European technical literature there is evidence of a growing acceptance of a philosophy of integration:

There is a link between more user-friendly public transport, traffic calming schemes which respect and enhance townscape, and their contribution to urban quality and economic well being.

The philosophy can be seen in action. The schemes studied reduce traffic speed, provide on-street car parking and give pedestrians and cyclists priority in certain areas.

Traffic measures are also integrated with proposals to enhance the local townscape, including street furniture and street lighting. Lessons can be learnt from the successful interdisciplinary integration.

PRACTICAL STEPS FORWARD

In some cases to achieve this degree of integration in Britain, even more is needed than interdisciplinary co-operation. National legislation and even public attitudes will have to be reconsidered.

A philosophy of integration should be encouraged in the short and long term. The study therefore concludes by endorsing four practical steps:

1. To introduce experimentally, 'Historic Core Zones', as advocated by EHTF. They are intended to give **pedestrians priority** over vehicles, reduce traffic speeds and the unnecessary clutter of traffic equipment.
2. To encourage **pedestrians to take greater responsibility towards drivers** and so allow the removal of unsightly protective guard rails.
3. To require new traffic equipment, signs and **road safety innovations** to be tested for their likely cumulative effect on the appearance of a street, before they are adopted as national standards.
4. To consider the experimental use of **reflective surfaced traffic signs**, instead of bulky illuminated signs. Where illuminated signs are essential, simpler, **less obtrusive supports and sign fixings** should be used.



Tree priority, Bonn

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