SD120

# Public Realm Design

## In The Heads of The Valleys

# A Good Practice Guide



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# EXECUTIVE SUMMARY

**This Good Practice Guide to Public Realm Design has been commissioned by five local authorities in the Heads of the Valleys area of South Wales who recognise that the way that public realm is designed, managed and maintained is crucial to the way that town centres are perceived and used. The Heads of the Valleys are a geographically and economically distinct region which includes a number of different local authorities which share similar challenges.**

The County Borough Councils of Rhondda Cynon Taff, Caerphilly, Merthyr Tydfil, Blaenau Gwent and Torfaen have collaborated with the Welsh Assembly Government (WAG) to commission a document which:

- Assesses the current issues facing the design and management of streets and spaces in the Heads of Valleys area (please see separate Baseline Audit for details);
- Draws on the latest public space and street design policy;
- Highlights current best practice in Wales, the UK and beyond;
- Establishes a set of principles and guidelines which will help to enhance the quality of town centre streets.

**'The Heads of the Valleys Good Practice Guide promotes public realm design of a lasting quality with regards to materials and design language'**

The most important background to this document is the recognition that the role of town centres in the Heads of Valleys area (and the UK as a whole) has changed.

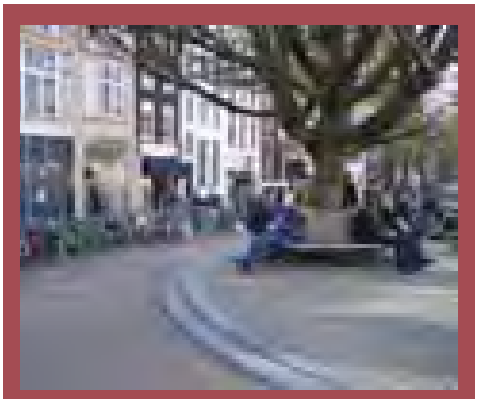
A generation ago, visiting the nearest town centre was a necessity to access shops, services and information and to interact with other people. The town centre is no longer the only venue for these activities as traditional town centres now compete with out of town retail parks, shopping malls, supermarkets and the internet for all of these things. For town centres to thrive, it is now more important than ever that they look good, feel distinctive, comfortable and inviting. This is particularly important in the Heads of the Valleys, a region where massive changes in the economic structure mean that the area and its population have to re-think strengths and opportunities.

In order for a public space to be successful, it is important that its design reflects the multitude of its functions while at the same time making people and their requirements the highest priority. Central streets and spaces need to cater for a variety of functions in order to be vibrant and it is crucial that they are created and managed in a way that ensures longevity to serve present and future generations of all sections of the community.

Since 2000, great efforts have been made to improve the quality of the public realm in the United Kingdom, and the amount of policy on this topic reflects this. Policy documents on all tiers acknowledge the far-reaching importance of the quality of public realm. The topic of sustainability is of particular importance as it links public realm issues with aspects like

**'All policy documents stress the need for collaborative and integrative working methods'**

community wellbeing, economic development, environmental quality, accessibility and local distinctiveness. The policy review highlights the aim to promote Wales to the world while at the same time strengthening the unique qualities that the country offers and the public realm in Wales forms an important cornerstone of how the country presents itself. The document also gives consideration to the clear shift from movement driven street design to an approach that acknowledges the social and placemaking functions of streets and incorporates these into the design. All policy documents stress the need for collaborative and integrative working methods regarding the design, management and maintenance process of streets.



Existing features such as specimen trees and level changes should be integrated to create memorable and unique spaces

The Heads of the Valleys Good Practice Guide promotes public realm design that responds to the urban context, strengthens the 'sense of place' and is of a lasting quality with regards to materials and design language. In individual chapters the document provides guidance on the elements of traffic management, surface materials, street furniture, trees and plants and public art, all of which benefit from a coordinated and consistent approach that feeds into an overarching strategy in order to create successful streets and public spaces. Lifetime costing is presented as a crucial measure of achieving high quality and designs that should be the Conservation Areas of the future.

Surface materials need to enable safe and efficient movement of pedestrians, cyclists and vehicles. General design, detailing, material characteristics, geography, local supply chains and future maintenance requirements form the main objectives that materials need to be chosen by. The use of high-quality, indigenous and long-lasting materials is critical for the creation of a sustainable and inclusive open spaces. This document provides a comprehensive appraisal on the cost, benefits and sustainability of natural versus prefabricated materials, both of which have their advantages that need to be considered in context.

The coordination of paving, landscape and architectural features supports the legibility of a place

Street furniture needs to be as integral to the streetscape as possible in terms of its position, layout and design. While new elements should be timeless and subtle, existing furniture needs to be reviewed through audits, so that old and new elements can form a coherent picture without clutter.

Trees and plants play an important role in towns which is often underrated as so far, there are few studies that measure the value of plants objectively. A creative and varied use of plants, and trees in particular, significantly enhance the visual amenity and even the monetary value of properties of an area and create a range of health related benefits. This document recommends species which are particularly well suited to town centres in the study area.

Public Art aims to engage people visually and intellectually and provide an opportunity to communicate the particularities of a place in an artistic way.

# EXECUTIVE SUMMARY

Successful public realm design does not only consist of high quality fixtures and fittings; aspects of maintenance and management are equally important for securing a high quality public realm in the long term. Any particular future maintenance liabilities need to be taken into account as early in the design process as possible, so that future liabilities can be minimised. This Good Practice Guide acknowledges the need for any repairs within the public realm to be in line with the original design concept as outlined in National and Welsh Guidance and recommends stockpiling as a measure to avoid patch repairs that undermine the aesthetic quality. It also acknowledges that an adequate and thought out installation of high quality materials is can be more cost-effective in the long term despite the initial capital spending being relatively high. Aspects like these raise the case for working, funding and procurement mechanisms to be reviewed comprehensively.

Implementing the technical recommendations of this document requires a step change in working methods and promotes a different approach to street design and management. In order to ensure the implementation of the Good Practice Guide's principles, formalised collaborative methods of working and the creation of multi-disciplinary street teams with a strong leadership within the local authorities are considered prerequisites to success. It is crucial that a shared vision and clarity is established so that everyone involved in street design and management shares a sense of 'ownership' and feels responsible for the outcome. Other measures such as raising awareness and the provision of training need to run in parallel.

It is important that people from all organisations and on all levels buy into this vision, starting from the WAG and including every Local Authority in the area. It is recommended that the Good Practice Guide is adopted by the local authorities to give the guidelines the required weight. The creation of a Heads of Valleys Street Design Forum and the appointment of a "Street Design Tsar" can help to promote public realm best practice, share ideas and create a platform for discussing public realm matters. The consultation with independent design led bodies like the Design Commission for Wales could form an important step towards better informed designs and a more comprehensive approach.

The document includes three Appendices. Appendix 1 highlights key considerations of the document on one page which provides a quick overview and topic-related page references from this document. Appendix 2 contains eleven case studies from the United Kingdom and Europe which represent best practice for a range of aspects that are discussed in the document and show the success of these schemes. In Appendix 3 detailed design guidelines provide additional technical information on materials, installation methods and requirements relating to the Discrimination and Disability Act (1995) and Sustainable Urban Drainage Systems (SUDS).

# PREFACE

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**The role of town centres is changing. Where urban life was once a necessity and taken for granted, today it is an option. New patterns of transport and movement, shifts in the economic basis for investment, and changes in social structures and expectations are transforming the nature and rationale of towns.**

Within the space of a few decades, urban life in the public realm has changed character and purpose, and the need to re-establish urban quality has grown accordingly. New opportunities are opening up alongside threats and challenges for towns and cities across the UK and the rest of Europe. With out-of-town-shopping and the increased use of the internet, we live in a time of profound changes in the role of town centres. There is a shift from being functional necessities for trade and commerce, to the current role as the focal point for communication and identity for communities and all members of society.

A guide to the design, management and maintenance of the public realm in the towns of the Heads of the Valleys comes at an appropriate time. There are few places in Britain where economic and social changes have had such a profound impact in recent decades. Whilst the loss of traditional industries and the need to redefine traditional town centres are not unique to South Wales, such issues are particularly relevant here. Seeking new ways to exploit the potential role of the public realm is essential for the revitalisation and quality of life in the Valleys communities.

**'Seeking new ways to exploit the potential role of the public realm is essential for the revitalisation and quality of life in the Valleys communities'**

This document sets out the basis for establishing a coherent framework for good policy and practice in response to such changes. It is based on an analysis and understanding of the increasing relevance of the quality of streets and public spaces, the "public realm", to the economic and social well-being of cities, towns and villages. The recommendations build on a thorough baseline audit of eleven town centres, the increasing body of knowledge and experience gained from places undergoing similar changes, combined with a synthesis of emerging government policy and best-practice guidance.

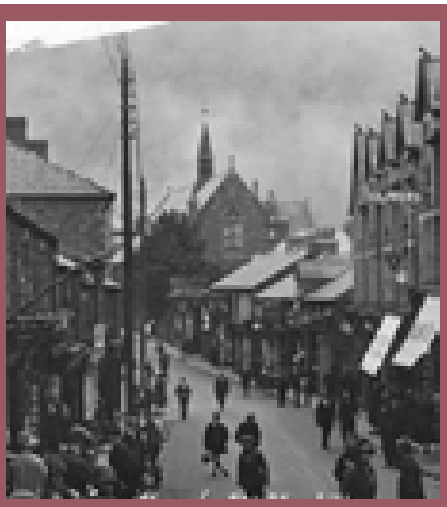

The Heads of the Valleys area with the eleven towns of the study shown in orange

The multitude of traffic elements focus on vehicles form barriers for pedestrians and make it an unpleasant place for people to use

For many years, town centres have been dominated by measures introduced to cope with the growing volume of motorised traffic. The functional requirements assumed to be essential for managing, controlling and coping with cars and lorries have defined the character of most streets and public spaces. Standardised signs, lighting, road markings, barriers, kerbs and signals increasingly fill the immediate foreground of our streets and spaces. The architecture and urban form that reflect the history and cultural identity of towns have tended to be obscured behind the layers of uncoordinated clutter associated with traffic engineering. As a result, town centres increasingly take on a similar appearance at the expense of individual identity.

Rediscovering and exploiting such identity is no longer merely a matter of aesthetics. Economists increasingly understand the links between investment and the distinctiveness associated with the quality of public space. Attractive towns attract both people and money. Fresh approaches to the problem of reconciling the needs of people, places and traffic now offer new opportunities to create and maintain a lively, attractive and distinctive public realm that can underpin the essential revitalisation of the South Wales Valleys urban economy.

Abertillery has changed. Once shoppers were reliant on the centre for goods and services. Abertillery must now compete with Tesco, other towns and internet shopping



The streets of Mountain Ash have changed from a place for social exchange to a conduit for movement of vehicles

# 01 PURPOSE OF THE GUIDE

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**This document is primarily concerned with streets and all of the other spaces between buildings in town centres which can be accessed by the general public. The condition and appearance of streets and public spaces reflect the aspirations of a town and is an indicator of the vitality of a place. Good quality public realm is therefore, essential in promoting a positive image of a place.**

## Why streets are important

'Who is in charge of your streets?'

Streets are complicated. They have to serve a multitude of functions both as spaces for transport, services and communication, and for the myriad of purposes associated with social interaction, exchange and civic activities. It is typical for numerous local authority departments, agencies and other organisations to have an impact or influence on the configuration and management of the public realm. Few local authorities have the organisational structure or executive powers to be able to effectively direct and coordinate such influences, and most find it difficult to answer the question "who is in charge of your streets?" Without clarity of purpose in the continuing investment and maintenance of the public realm, it is difficult to ensure maximum benefit from this critical public asset.

## This document - a synthesis of national policy applied the Heads of Valleys

This guide attempts to assist local authorities in the Heads of Valleys Programme Area and their partner organisations, together with the communities they serve, to introduce some clarity for policy development and advice on practical measures. Guidance and recommendations for good practice in the management of the public realm is plentiful at the national level. There is a plethora of new manuals, local advice notes, guidance documents and best practice guides from government and design agencies as well as from most of the relevant professional institutions. This document draws on the full range of such advice to provide guidance for the specific context of the principal settlements in the Heads of the Valleys, building on local knowledge and experience from engineers, architects, urban designers, landscape architects and other specialist disciplines.

# 01 PURPOSE OF THE GUIDE

Clarity of purpose and an understanding of the potential for the towns of South Wales is intended to benefit a wide range of interested parties. These include:

**The Public:** Everyone who lives in or around the valleys towns, along with those who seek to earn a living from trade and commerce.

**Professional staff:** engaged in the strategic and day-to-day design and management of the public realm, including senior managers, highways and transport engineers, urban designers, planners, artists, lighting specialists, landscape architects, conservation officers, maintenance staff, utility contractors, health officials, those with responsibility for children, and many more.

**Politicians:** both local, regional and national, responsible for shaping the future vision and strategic direction for urban communities and their social, economic and environmental legacies.

Until recently, the concept of the public realm of a village, town or city was rarely the subject of public discussion or policy initiatives. Even for the more progressive local authorities, concerns about the state and quality of the public realm remained the concern of a few planners or urban designers, whose input tended to be overshadowed by the functional requirements associated with traffic circulation. Today the growing realisation of the critical economic and social relevance of the public realm has widespread implications across almost every aspect of the local agenda. The design, management and maintenance of streets and public spaces underpins a wide range of initiatives including transport, trade and commerce, sustainability, health, recreation and leisure, community cohesion and social interaction, information and communications, democracy and diversity, culture and creativity, security and safety, and (perhaps above all) the promotion of civility.

# 01 PURPOSE OF THE GUIDE

## OBJECTIVES

The guidelines contained in this document are intended to help create streets which satisfy the following objectives:

- Streets should be designed in a way which puts people first;
- Public realm must be safe, clean and attractive;
- Town centres need to be diverse vibrant places that have a variety of functions;
- A public realm should communicate the common character of the Heads of the Valleys whilst allowing individual town's unique characteristics to shine through; where possible, the public realm should refer to the varied history of the region
- Streets should be created and managed in a way which safeguards the environment for future generations.

# 02 BACKGROUND

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## GOOD PRACTICE GUIDE & NATIONAL POLICY

**'In order to be sustainable, good design needs to settle with a balance between the economic, social and environmental factors'**

A huge amount of effort has been concentrated on improving the general quality of the streets in the UK since 2000. As a result it is impossible to review all of the guidelines, policy and good practice notes here. Instead we have summarised the main documents which describe the basic principles which this document will apply to the town centres in the Heads of the Valleys Programme Area.

These documents provide a strong policy/guidance context that this guide will be embedded in and outlines general aims of a successful public realm. The review and synthesis of the policy forms the background for our analysis, conclusion and final recommendations in this guide. A more comprehensive breakdown of the research into best practice, policy and guidelines are referenced in the Bibliography.

The theme of sustainability is being dealt with in all of the policy documents as it forms the very principle that good design needs to follow. In order to be sustainable, good design needs to settle with a balance between the economic, social and environmental factors.

**People, Places, Futures, Wales Spatial Plan Update 2008 (Welsh Assembly Government, Department for the Economy and Transport (WAG DE&T) 2008)**

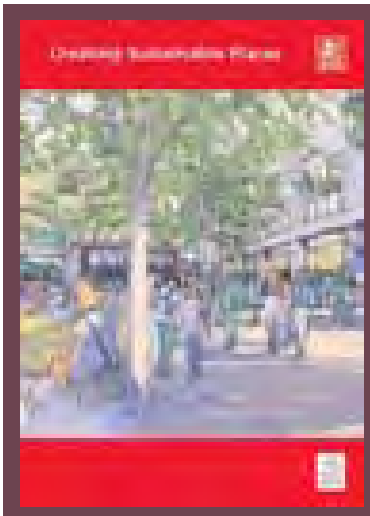
The Wales Spatial Plan sets out a strategic framework to guide future development and policy interventions in Wales, its themes include:

- Building sustainable communities
- Promoting a sustainable economy
- Valuing our environment
- Achieving sustainable accessibility
- Respecting distinctiveness

Part of the strategy for South East Wales is to improve the quality of life, retain and attract residents, and increase the prosperity of the Valleys. The public realm and its quality play a key role as they impact on all of the above themes.

The aim of fostering "A cohesive identity which sustains and celebrates what is distinctive about Wales, in an open and outward-looking way, is central to promoting Wales to the World..." (p.46) and this includes social, economical aspects as well as the natural and built environment. "Conserving and celebrating the unique heritage of each area is important. Key settlements need a high quality environment with quality buildings and spaces, nurturing a sense of identity and community." (p.46) Each town has a role to play with its own identity and heritage. Within the network, all towns should complement each other and give character to the region as a whole.

## Creating Sustainable Places (WAG DE&T)



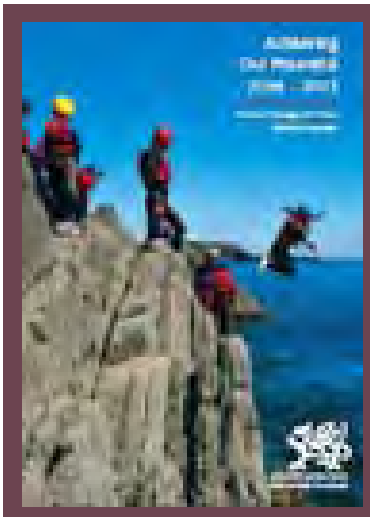
Creating Sustainable Places
WAG (DET)

Creating Sustainable Places will be, in part, implemented by the recommendations contained in this report. The aims of the Creating Sustainable Places are, in essence, the same as those which have guided the preparation of this report.

"We believe in a definition of 'Sustainable Places' as 'places which people will want to be in, live in and work in'. If the design teams genuinely have this as an overriding objective, we believe that sustainable and visually attractive buildings and places will result." (p.6)

"Our aim is to contribute to the development of well designed, sustainable places which will bring benefits to businesses and communities and the people who live and work in them or visit them. We believe places with strong and flexible economies, vibrant communities and a diverse and healthy environment are places which will thrive and prosper in the long term." (p.4)

## Achieving Our Potential 2006-2013, Tourism Strategy for Wales, Mid-term Review (WAG DE&T 2008)



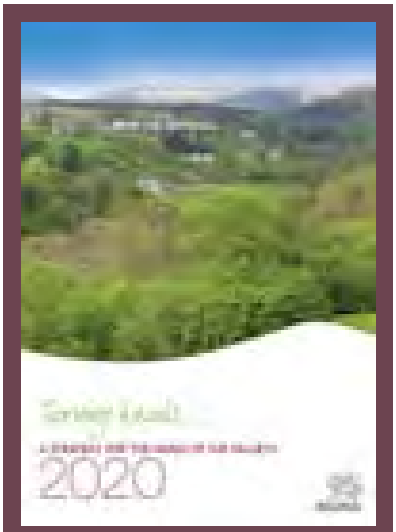
Achieving Our Potential:
Tourism Strategy for Wales
WAG (DET)

The tourism strategy outlines the potential that tourism has for Wales regarding its natural variety and beauty as well as outdoor leisure facilities and industrial heritage. This potential plays an even bigger role in the Welsh regions that have been hit by economic changes in the past and are in need of visions for the future.

The strategy gives four priorities for action: marketing, exceeding visitor expectations, improving skills and achieving sustainable growth. The main aim is to build on the assets that Wales has to offer and to strengthen and market the distinctiveness of the place in order to be able to compete with other destinations in the long term. The quality of the public realm in South Wales plays a vital part in this as it strongly influences the perception people have about a place. Thus, it forms part of the environment and its quality is crucial in attracting visitors. While the open countryside might be the most important asset, the towns are places that visitors will inevitably use for entertainment, banking, accommodation, etc.

# 02 BACKGROUND

## Turning Heads – A Strategy for the Heads of the Valleys 2020 (WAG DE&T 2006)




Turning Heads:
A Strategy for the Heads of the Valleys
WAG DE&T

The strategic framework for the Heads of the Valleys Region presents the vision for the area in the relation to the Wales Spatial Plan. Turning Heads seeks to address the problems of a decline of economy and population; high levels of economic inactivity; an unfavourable image and poor maintenance of key natural and historic assets. The framework outlines where the potential of the Heads of the Valleys Region lie in strong communities, a rich built and natural environment, public investment and the upgrade of transport links are the backbone of this framework.

In order to achieve the strategic goal of an attractive and "well-used, historic and build environment", the appearance of the public realm and regional attractions is important as they influence the perception of a town or area. The development of a coherent tourism and leisure experience requires town centres that are in keeping with the wider landscape and keep up to the standards that the high quality natural environment offers. To achieve this aim, "...we will... encourage consistent standards of urban and landscape design." (p.19)

In order to formulate a network of diverse places, the framework seeks "To preserve and make the most of historic patterns of settlement..." in order to "...identify roles for towns and villages... that enable them to complement each other and that serve the diverse needs of those who live in, work in and visit the area" (p.18) The public realm is integral to this.

## TAN12: DESIGN (WAG 2002)

**'The appearance of the public realm and regional attractions are important as they influence the perception of a town or area'**

In the TAN12, the WAG recognises that "The quality of cities, towns and the urban and rural landscape are important in defining the confidence and direction of a nation and its culture... Good design has the potential to assist environmental sustainability, economic growth, and social inclusion." (p.1) The public realm is a significant part of the urban landscape and contributes greatly to the atmosphere and image of a town. Its state is thus crucial to the quality of towns and people's quality of life.

TAN12 stresses the importance of putting elements into context and to see the built environment as a whole, rather than considering its elements in isolation. TAN12 acknowledges the impact finances have on design solution and highlights the importance of making decision with a long

**'Assessment of value for money need to be based on the 'whole life' costs of a development and it is important that the long-term management and maintenance implications of design decisions are fully explored as well as assessing the more immediate costings'**

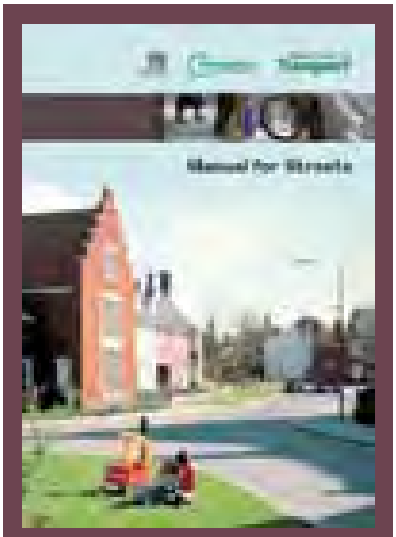
**(TAN12:DESIGN p.4)**

term perspective. "Assessment of value for money need to be based on the 'whole life' costs of a development and it is important that the long-term management and maintenance implications of design decisions are fully explored as well as assessing the more immediate costings." (p.4) Regarding the public realm, long-term maintenance is mentioned as an important factor that has got a vital role in fulfilling aesthetic and environmental standards while at the same time ensuring an accessible environment for all.

TAN:12 sets out objectives that are underlie good design, most of which have an impact on the public realm of some sort. However, the note explicitly names the promotion of high quality in the public realm, a successful relationship between public and private space as well as the adoption of inclusive design principles as three of the objectives.

A bad quality pedestrian environment discourages people from walking and cycling while an increased use in cars leads to a pedestrian hostile environment. The TAN notes this vicious circle and highlights the importance of reversing this self-perpetuating trend. In order to achieve this, planners and highway engineers need to "...assess how the layout of infrastructure can contribute to the promotion of walking, cycling and public transport," while "the emphasis should be on the safe accessible movement of people and goods along attractive routes..." (p.19)

**Manual for Streets (Department for Transport (DfT) 2007)**



Manual for Streets
DfT

The essence of the document is the shift of the focus from movement-orientated streets to streets that are designed for people and at the same time function as a place rather than a space purely for traffic. It recognises the social function of streets and highlights the importance good street design can have on a community and on people's quality of life in general. Much of the Manual for Streets is in line with aspects in the TAN12, such as inclusive design, a collaborative design process, an overarching vision and designing in context.

Manual for Streets is policy guidance for both England and Wales. The document is aimed at streets with light traffic and the document sets out that it should only be applied to those. Even though there might be heavy traffic in some town centres, the conflict between vehicle-focused spaces and the need for a 'sense of place' and function beyond movement is similar. Hence, the principles of Manual for Streets equally apply to the context of town centre streets.

The document acknowledges that good street design is in parts reliant on its surroundings with proportion between buildings and space playing an important part. Public spaces need to be framed by buildings fronts in order to provide natural surveillance and to allow an interaction between the private and the public space. Additionally, aspects like local distinctiveness, the importance of soft landscaping, the reduction of clutter and the longevity of the design are also stressed.

In order for streets to work well, the needs of all user groups need to be incorporated and conflicting requirements need to be compromised and the design optimised accordingly. Particular care needs to be taken regarding requirements for the disabled people and the elderly. The needs for pedestrians and cyclists should not be compromised.

Manual for Streets formally introduces idea of shared spaces. These are parts of the public realm that do not include the typical separation between pavement (pedestrian space) and carriageway (vehicle space). Shared spaces are intended to create a more pedestrian friendly environment. They work in areas with up to 100 vehicles per hour (vph) and seek to reduce vehicle speeds due to the uncertainty that the presence of pedestrians creates.

**Local Transport Note 01/08 Traffic Management and Streetscape (DfT 2008)**


Traffic Management and Streetscape
DfT

The Local Transport Note (LTN) 01/08 entitled Traffic Management and Streetscape is being endorsed by WAG, as are all UK documents of this nature. However, the Assembly is not responsible for the adoption and implementation of this document. As is the nature of a “local” transport note, it is up to the Local Authority to adopt this approach if they see fit to do so.

Traffic Management & Streetscape aims to support all professionals that are involved in the layout and design of streetscapes in order to “enhance streetscape appearance by encouraging design teams to minimise the various traffic signs, road markings and street furniture associated with traffic management schemes,” (p.7). It important to note the “detrimental impact that cluttered and poorly designed schemes have on the environment and living conditions...” (p.7), and how small changes can have significant impact on the environment, both visually and functionally.

**'Good scheme design must satisfy regulatory requirements, meet functional objectives, provide clarity and safe movement for all road users. But it must consider and provide for the visual quality of the streetscape as well'**

**(Traffic Management and Streetscape p.8)**

Crucially, the note also stresses how the delivery process, the management and organisation of responsibilities within the public realm have a large influence on the success of public realm. It stresses the importance of implementing regulations in a flexible way in order to avoid making vehicles the most important element in towns and to meet the full variety of functional and aesthetic requirements. "Good scheme design must satisfy regulatory requirements, meet functional objectives, provide clarity and safe movement for all road users. But it must consider and provide for the visual quality of the streetscape as well," (p.8).

The note acknowledges the importance of place as one of the main design components for streetscapes. It promotes a long-term vision for projects that result in aesthetic and financial benefits. Appropriate monitoring and maintenance procedures are crucial for a scheme to be successful in the long term. "A scheme's integrity at completion may only be retained post-implementation if the scheme is regularly maintained using correctly specified materials skilfully applied... Regular streetscape audits and effective maintenance programmes will help in identifying and rectifying streetscape-related issues," (p.35).

As many areas of expertise are covered within the public realm, collaborative working, good training and an overarching approach is seen to be crucial with a multitude of aspects to be negotiated. The document promotes the role of a design champion who can provide the necessary overview over a scheme and appraise single actions in relation to the general aim of the scheme. Also, the document responds to themes such as access for disabled people, personal security, providing "best value" in scheme procurement and community engagement.

### Traffic Signs Regulations and General Directions (TSRGD), SI2002 No 3113 (DfT 2002)

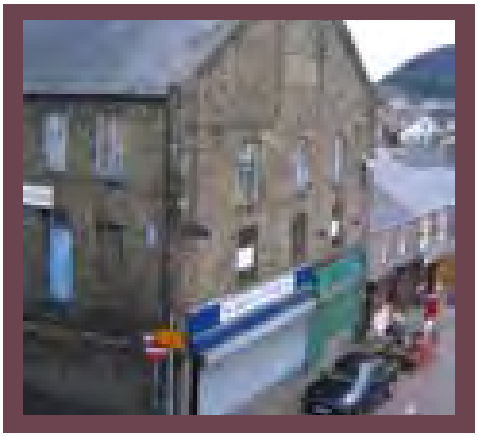
"The TSRGD 2002 prescribes the designs and conditions of use for traffic signs to be lawfully placed on or near roads in England, Scotland and Wales. Traffic signs are essential for the implementation of traffic management schemes and for the enforcement of road traffic law." (DfT Circular 02/2003, p.1).

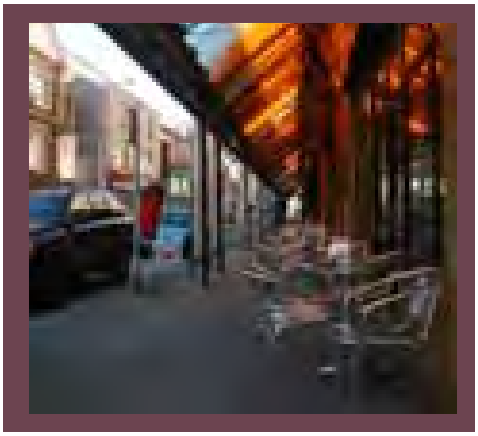
The document contains regulations and schedules specifying prescribed traffic signs regarding their size, colour and type. It also outlines the condition under which certain elements must be placed on or near roads, including signs, illumination of signs, crossings, road markings and signals.

The document is a Statutory Instrument. However, there are certain flexibilities within the implementation of its content that support the good design of a scheme, in particular flexibilities regarding the required size and numbers of elements and specified variations.

# 02 BACKGROUND

## DISTINCTIVENESS IN THE HEADS OF VALLEYS





Due to its relative inaccessibility, the Valleys in South Wales do not have a long history of urbanisation. Until the start of the 19th century, South Wales was characterised mainly by its mountainous landscape, abundant green scenery and narrow valleys with rivers running through them. This changed with the rise of iron and coal industries when large parts of the landscape were transformed radically and settlements for the workers were created. The appearance of the Heads of the Valleys Region has largely been influenced by the industrial revolution and the decline that followed from the 1930s to the 1980s.

Large parts of the settlements consist of traditional miners' terraces which were built in a relatively short period and display little variation in shape and style. The settlements do not contain the long history and pattern of gradual growth that settlements with a longer history often have. Due to the topography, the shape of the settlements tends to be elongated and towns are often lined up along the valley bottom with only subtle distinctions between them that are only obvious to those who know the area well.

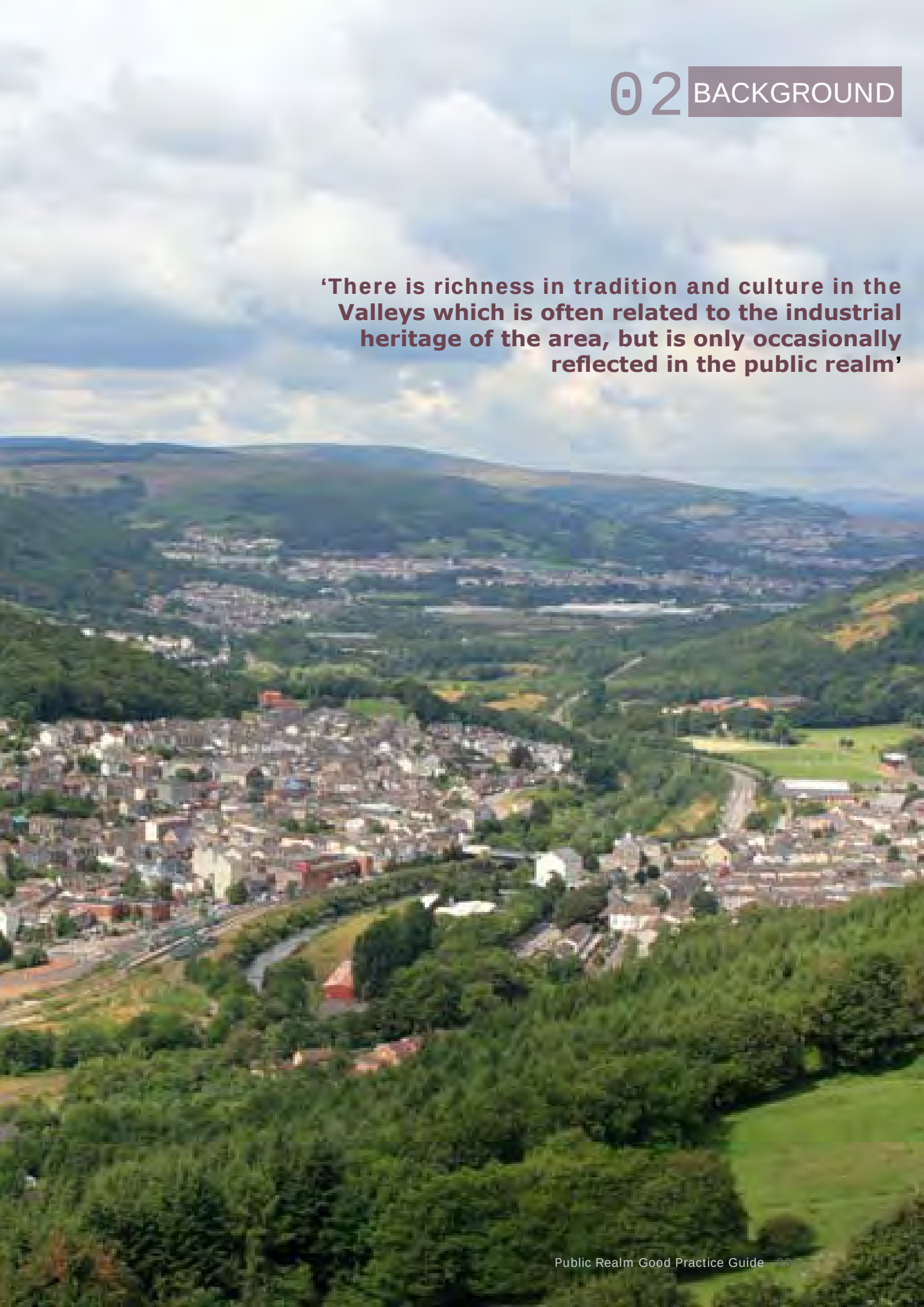
The economic decline and decrease in population have created a slightly melancholic atmosphere and this is reflected in the public realm. However, with the re-growth of vegetation, the landscape is returing to a striking feature with high potential for tourism on a regional if not national level. The landscape provides good outdoor leisure opportunities as well as a great backdrop for many of the towns. This highlights the great disparity between the beautiful countryside and the town centres even stronger and the need for improvement becomes apparent.

There is richness in tradition and culture in the Valleys which is often related to the industrial heritage of the area, but is only occasionally reflected in the public realm. Local traditions of craftsmanship only occasionally show and materials and elements in the town centres often come from of a standard palette and bear little relation to the region.

Due to the valleys' topographic limitations and isolation, people show a very strong identification with the town they live in rather than the area as a whole. This has to be a seen a strong potential on the way to making towns more distinctive from one another. While the landscape is left to recover from the impact of industry, the towns must continue to recover from its decline.

# 02 BACKGROUND

**‘There is richness in tradition and culture in the Valleys which is often related to the industrial heritage of the area, but is only occasionally reflected in the public realm’**

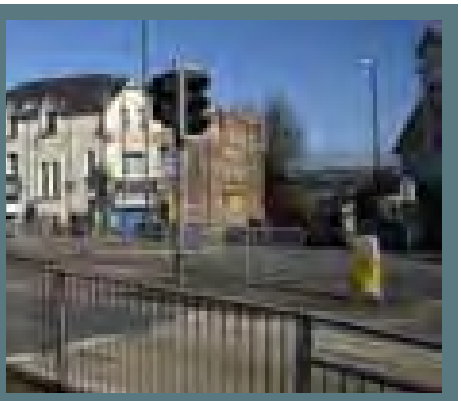


# 03 PEOPLE, TOWNS & TRAFFIC

# 03 PEOPLE, TOWNS & TRAFFIC

**The most important challenge for design teams is to create a balance between the requirements of pedestrian activity and vehicular movement. While town centres need to be accessible for vehicles, the focus for all layout and design decisions should primarily be based on pedestrian movement if footfall, economic activity and the quality of place are to be maximised. This is consistent with the principles in *Manual for Streets* and *Traffic Management & Streetscape.***

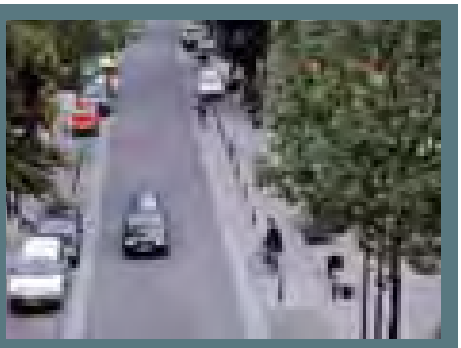
It is important to acknowledge that the centre is the most important part of a town and plays a crucial role in shaping its image. A pedestrian friendly public realm plays a very important role in forming a positive image for a town.



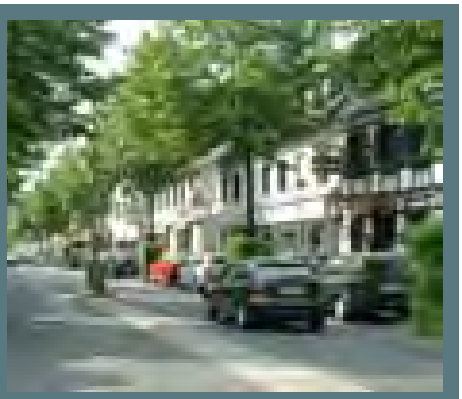
This entrance to a Valley town is obscured by standardised traffic paraphernalia

For many years the streets and spaces of most towns have been defined by the principles of "segregation" of traffic from other civic activities. Maintaining a clear division between "the highway" and "the public realm" was central to the policy advice of *Traffic in Towns*, the recommendations presented to the UK Government in 1963 by the committee chaired by Colin Buchanan. Separation of pedestrians from traffic became a central plank of government policy in documents such as the 1965 "Roads in Urban Areas". The resulting landscape of bridges, barriers, underpasses, signs and signals is now seen as a key factor in the decline in civic quality and the consequent decline in pedestrian activity.

Recent studies increasingly demonstrate the link between economic activity and the quality of the public realm. The research for the "Core Cities" group, led by Professor Michael Parkinson of John Moores University, Liverpool, identified the key role played by the public realm in attracting new economic investment. More recent research by the Commission for Architecture and the Built Environment (CABE) has identified the direct retail benefits arising from quality streetscapes (*Paved with Gold: the real value of street design,* CABE 2007). Specifically, in a small sample of 14 new public realm schemes, MVA Consulting found that rents had increased in areas with upgraded public realm. Significantly, there was a direct link between extent of public realm intervention and amount of rent increases (up to 12% in schemes, with de-cluttering, new surfaces and a more relaxed attitude to risk).



This street in Copenhagen carries thousands of vehicles per day, yet is simple and uncluttered. It is designed as a *place* first and a thoroughfare second



The landscaping of this street in Hennef, Germany with planting and integrated parking bays is functional and attractive

# 03 PEOPLE, TOWNS & TRAFFIC

## General Principles

Aberdare: Traffic elements undermine the effect the beautiful facade has on the adjacent public realm

A number of key assumptions concerning traffic circulation, pedestrian movement and safety are increasingly being reconsidered in light of successful experiments aimed at integrating low-speed traffic into the public realm. In contrast to the segregation and pedestrianisation that emerged from the Buchanan Report, *Traffic in Towns*, many local authorities are exploring the potential to consider the public realm as a coherent and seamless entity, in which the need for vehicular movement is an integral component of successful space. Often referred to under the broad label of "Shared Space", such principles underpin many of our policy recommendations and general principles. These include:

- Reinforcing the unique sense of place of each town centre;
- Placing the needs of pedestrians uppermost in all planning and design principles;
- Introducing measures to create a low-speed, free-flowing traffic
- Minimising the use of traffic controls, complex traffic management arrangements, signs, signals, road markings and other features associated with highway design;
- Recognising that risk can be an essential component of good public space. A lack of certainty combined with a need to engage with the activities and protocols of public space is a key feature in reducing traffic speeds and promoting safety;
- Treating drivers and pedestrians with respect. Good street design needs to recognise people's abilities to resolve problems and to negotiate solutions. Such an approach has important implications for minimising signage, regulations, barriers and controls;
- Creating a public realm that is permeable, legible, and easily navigated by those with physical and especially visual impairments.

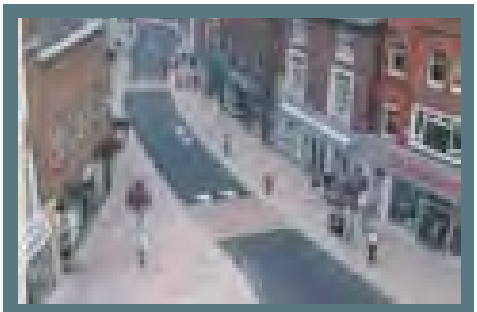
By using subtle traffic elements, the architecture is granted a bigger impact, while the environment is more welcoming for pedestrians

## Specific Guidance

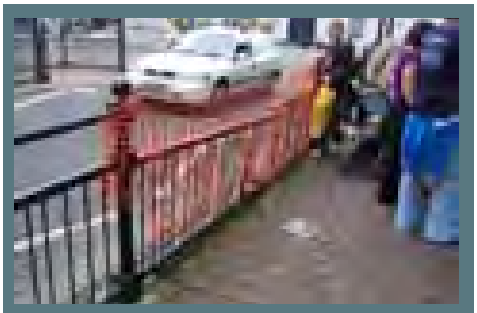
The topic of risk is extensively documented in *Highway Risk and Liability Claims* (UK Roads Board, 2005) and *Living with Risk: Promoting better public space design*, CABE 2007). Therefore it will not be covered in detail here. There are strong links between reducing driver certainty, increasing pedestrian permeability and a reduction in the number and severity of road traffic accidents. This has been documented at Kensington High Street, Cowley Road, Oxford (a DfT pilot under the Mixed Priority Routes scheme) and a growing number of other such schemes where reducing vehicle priority and therefore driver certainty has had the impact of slowing traffic, improving capacity and reducing the severity and incidence of accidents.

Low design speed, pedestrian priority and reduced accidents (Cowley Road, Oxford)

Pedestrian courtesy crossings and non standard signs (Shrewsbury)



Review of traffic management and minimal road markings result in a good quality pedestrian environment (Oswestry)



Size and quality of pedestrian spaces are compromised in favour of drivers' convenience

Case law (Gorringe v Calderdale DC) stipulates that the onus is on the individual to "take the road as they find it", meaning that it the onus is not on the Local Highway Authority to alert drivers to every potential hazard. In the UK, very few successful cases have been brought against bad design.

Local Highways Authorities in the Heads of Valleys should now use the above precedents and principles, alongside Policy Guidance contained in *Traffic Management and Streetscape* to take an approach to highway design which reduces certainty for vehicles and places the priority on the pedestrian.

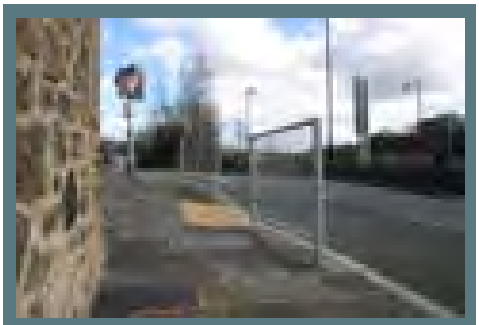
Traffic in town centres should be limited to a **design speed of less than 20mph** by carefully using uncertainty and additional priority placed on pedestrians. Consequently, this can enable the removal of many of the regulations, barriers and problems associated with motorised traffic. Designing for lower speeds brings critical benefits for promoting an inclusive environment, as well as advantages for safety, for reducing journey times, for encouraging walking, cycling and public transport, and for minimising noise and polluting emissions. This recognises that people, as well as vehicles, have an important place in our town centres.

The use of **traffic regulation signs** should be limited to the absolute minimum necessary. Where required, signs should be limited in size and number, and carefully integrated with buildings, street furniture and lighting columns. There is considerable scope with TSRGD (2002) for Highway Designers to take decisions about signage based upon local circumstances. If necessary they can even to apply for special dispensation to WAG to apply for alterations. (As was the case where engineers in Shrewsbury applied to Secretary of State to display smaller than usual signs.)

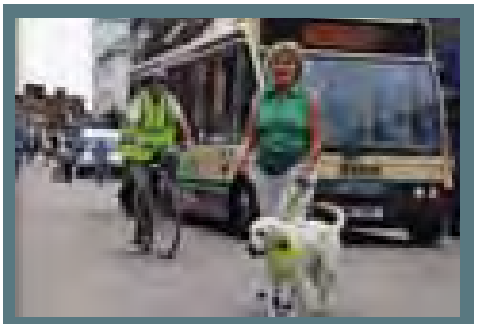
**Road markings** have a significant negative visual impact. Their use should be limited to main roads with heavy traffic away from town centres. In town centres, measures such as centre-line markings, hatching and stop lines should be avoided wherever possible. Yellow parking restrictions should be minimised through the introduction of "Restricted Parking Zones" and the careful use of defined parking bays which need to be integrated into the streetscape as much as possible. Should road markings be absolutely necessary, they should be as narrow as possible and used sparingly, with careful reference to paving materials and the coherent spatial design of the public realm. Again, TSRGD 2002, offers considerable latitude to the application of road markings.

Simplicity and legibility are key to the **organisation of traffic movement** in towns. The overall network should be configured to facilitate convenient access to town centres without degrading the quality of the centre itself. In addition, parking strategies should encourage access to town centres on foot, by bicycle or by public transport. Complex one-way systems

Traffic elements undermine the quality of the built environment



Shared objectives in Audits and Design processes can avoid unnecessary guardrail



Streets must be comfortable for all

and convoluted circulatory patterns should be avoided. The use of traffic signals for intersections and pedestrian crossings should be avoided wherever possible.

**Quality and Safety Audits** are essential tools. They are useful for maintaining quality and coherence which requires constant management, especially to avoid the tendency for additional elements to be added piecemeal over time. Quality audits, such as those promoted by organisations such as CABE and "Living Streets" can be a useful way to maintain standards and to involve local residents and traders. Such audits can be combined with safety audits as a comprehensive management tool.

**Maximising accessibility** is important to ensure that as many members of society as possible can enjoy access to, and movement within, town centres. This is particularly important with an ageing population, but it is equally relevant for children, people with learning difficulties, and those coping with physical and visual impairments.

Reducing vehicle speeds is key to achieving such accessibility, and reducing the emphasis on highway elements is critical to this objective. But considerable care, patience and ingenuity and involvement with local groups is essential to overcome the many potential obstacles presented by conventional street design. Careful attention to the design of ramps, kerbs and changes of grade are especially important in the steep-sided valley towns.

Maximising confidence and legibility for blind people and those with visual or hearing impairments presents particular challenges, and there are, to date, no universally accepted solutions. However, the work prepared by University College London (UCL) should be closely monitored. Within this project, PAMELA (Pedestrian Accessibility and Movement Environment Laboratory), a reconfigurable laboratory is used to simulate existing and proposed pedestrian environments. UCL's work is providing information on a language of tactile and visual delineators can allow the development of routes that can be navigated by those using guidance from canes, from guide dogs, or through limited sight. Whilst it is important that such delineators do not themselves introduce physical or psychological separation into the public realm, a combination of tactile materials and subtle kerb details can provide navigational guidance and the creation of a notional "safe space". *(Examples in Appendix 2)*

Compliance with the requirements of the Disabilities Discrimination Act requires those responsible for the design and management of streets and public spaces to demonstrably take account of the many and varied needs of disabled people. The Act itself provides few clues as to potential solutions, and existing guidance such as "Inclusive Mobility" (DfT 2002) can offer only general advice. It is essential that creative and determined effort is provided to generate solutions at a local level that take account of the key issues involved. Therefore, an early dialogue and consultation with local access groups is very important.

# 04 SURFACE MATERIALS

# 04 SURFACE MATERIALS

**The purpose of surfacing is to enable safe and efficient movement of pedestrians, cycles and vehicles. There is not a shortage of the types of materials available for use in town centres. The purpose of this section is to provide guidance on the selection of the most appropriate materials from what is currently available.**

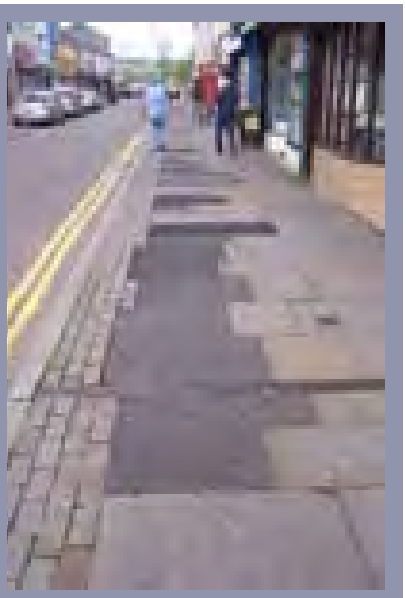
**'The unique qualities of individual towns (and parts of towns) need to be identified to inform the selection and design of materials'**

This section outlines some of the basic principles which need to be applied. However, we recognise the importance of detailed design and have included more specific guidelines for design practitioners in the appendix. Also, the manner in which the materials are laid have an important bearing on long-term streetscape quality.

Once a commitment has been made to a particular material or selection of materials it must be the intention to maintain that material for future generations. We should be designing the Conservation Areas of the future. This places a considerable responsibility upon the design team.

## General Principles

- Each Local Authority and its partners need to agree and adopt a prescribed palette of materials to bring a considerable degree of unity and clarity to Heads of Valleys town centres.



The impact of inadequate repairs on the image of a town can be significant

- Unless there is an overriding design intention, wherever possible, Authorities need to use materials which are authentic to the Heads of Valleys as a means of promoting the identity of the local area.
- The use of indigenous materials is actively encouraged. Locally sourced material has lower embodied energy and helps to promote local supply chains and economic development in Wales.
- Stone and pre-cast concrete materials both have advantages and disadvantages. Each should be used sensitively with reference to aesthetic impact, micro-context, longevity, type of use and budget.
- Materials should be selected based on their durability versus cost. This concerns the capacity of any given material to retain its characteristics over time, namely colour, texture and strength.
- The unique qualities of individual towns (and parts of towns) need to be identified to inform the selection and design of materials.
- Paving patterns should not be overly fussy. They should be designed with particular materials in mind with the intention of adding an element of interest to the townscape. They must be evaluated with the future in mind and account taken of the possibility of future maintenance issues. *(See Section 8 for further information regarding maintenance)*

Materials need to be well selected, expertly installed and well maintained to be sustainable and distinctive

- Materials need to be expertly installed to prevent unnecessary future maintenance liabilities. *(See Appendix 3 for details on installation)*
- Inclusive design must inform surface material specification, design and implementation.
- The Heads of Valleys area has high annual rainfall. The most effective method of directing rainwater will be the simplest. Sustainable Urban Drainage Systems (SUDS) should be a consideration on every scheme. *(See Appendix 3 for additional information and examples)*

## Specific Guidance

A well coordinated palette of concrete and stone materials

At present, few towns in the Heads of Valleys are achieving a consistent **palette of materials**. Ad-hoc schemes (often arising from responses to funding opportunities) and repairs are creating discordant streetscapes. Each of the town centres needs to develop its own consistent palette of materials using these guidelines.

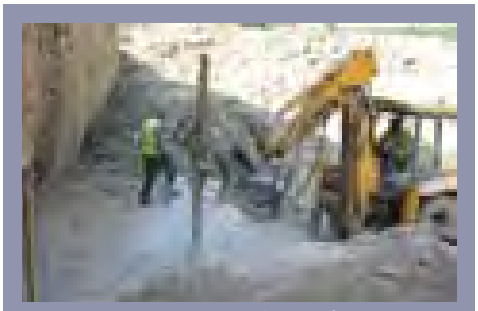
As these palettes of materials are developed, it will be important to prepare schemes that use **materials which are authentic within the Heads of Valleys**. Pennant sandstone, is the original and most prevalent building material along the South Wales Coast and the Welsh Valleys. The wider use of pennant sandstone as a standard landscape material seems therefore a natural conclusion to be drawn in this report. Therefore, locally sourced, riven and sawn pennant slabs and setts along with bespoke pennant kerbing are considered appropriate. Although not locally sourced, granite is considered a traditional material in this context due to the prevalence of its use. Elsewhere, in more contemporary urban environments and in parts of towns which lack any historic context, consideration should be given to a wider palette of natural stone or pre-cast concrete units if appropriate.

Traditional slabs that have been considered suitable – York Stone (on the left) superseded by riven pennant sandstone slabs at Blaenavon.

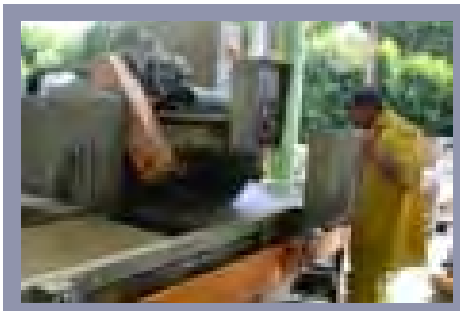
Aberdare and Mountain Ash are both good examples of the need to achieve regional distinctiveness. The surface construction in both towns is generally to a reasonable standard of design and implementation, but both, due to the use of pre-cast concrete, have a limited lifespan. Furthermore, identical materials to those used in Aberdare and Mountain Ash are present in numerous towns across UK and Europe. Alternatively, in Blaenavon, Torfaen CBC have used an extremely hard wearing, locally sourced pennant sandstone which reflects local character, history and geology. Although the cost of this material at the outset might be relatively high, it is expected that the lifetime costs will be considerably lower.

The **embodied energy** of preferred materials must be carefully considered. We have not found a cogent report outlining whether natural stone or pre-cast concrete is the most sustainable. However, logic seems to dictate that natural stone from local quarries is likely to have the lowest embodied energy when compared to pre-cast materials and imported natural stone. After all, the preparation of local stone supplies is straightforward, from quarry to the production yard and onto the construction site.

# 04 SURFACE MATERIALS



From quarry to street. Quarrying pennant sandstone in the Forest of Dean...



... cut pieces are sawn to a strict tolerance ...

... finished prior to delivery...

... and installed on site

Pre-cast paving, when correctly specified, is a resilient product. However, we have noted qualities, mainly of colour and texture, can decline over time and we expect that these materials will only last around fifteen years. The provenance of these materials is lost in the production process and the fact that they may be used countrywide limits their value in providing a town with a unique sense of place.

Pre cast concrete products have several key advantages. They are uniform and easy to lay. In terms of cost, concrete products are generally selected in preference to more expensive natural stone. However, in terms of sourcing, these materials are rarely locally produced.

In terms of sustainability, the production process of concrete materials involves a series of technologies which include stone extraction, crushing, transportation, mixing with cement and manufacture in specialised presses prior to delivery to site for construction. Energy figures for this process have not been obtained, but are expected to be high.

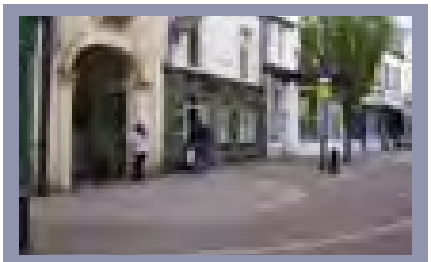
| Pre cast concrete | Natural, locally sourced stone |
|---|---|
| • Readily available<br>• Accurate to 1mm<br>• Wears out within 20 years (max)/degrades gradually<br>• Complex production process<br>• Cheap<br>• Manufactured<br>• Standardised forms<br>• Bland and homogenous | • History of supply constraints - although these are easing<br>• History of being unable to supply to strict tolerances (now less of an issue)<br>• Can last indefinitely/retains qualities<br>• Simple low energy production<br>• Relatively expensive<br>• Can be cut to any shape<br>• Local provenance, authenticity and distinctiveness |

Pre cast concrete versus locally sourced stone

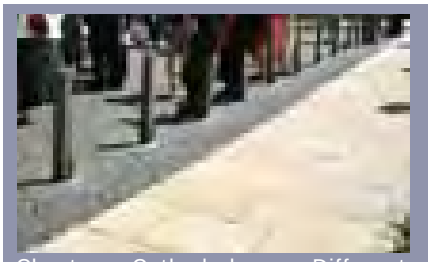
Developing indigenous supply chains provides the means of enhancing opportunities for the use of locally sourced materials. In terms of sourcing materials in a sustainable way, the development of these is essential. Recent public realm schemes in South Wales have obtained stone materials from overseas. These are first quality materials where the material selection process is governed mainly by the cost and the quality of the materials. However, sourcing these materials from overseas is commonly criticised on the grounds that poor working conditions appertain at the source quarries, and that the environmental impact of transporting heavy materials over long distances is environmentally damaging. Concerning labour conditions, it is essential that clients should require assurances of production conditions that are independently verifiable from suppliers or that suppliers subscribe to the Ethical Trade Initiative. With regards to transit from overseas, stone products where feasible should be specified transported as ballast, rather than as goods.

Historically, demand for stone has declined as pre-cast products and other building materials have superseded its use. This has reduced the number of local suppliers to a very few local quarries, these being near Pontardawe and in the Forest of Dean.

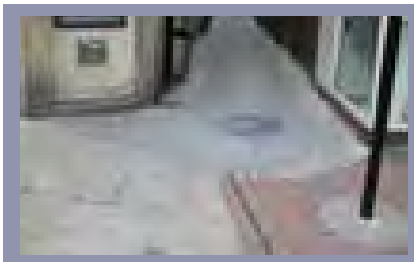
The economics of stone quarrying mean that new seams are not opened up without sufficient demand. However, there remains latent demand for locally sourced natural stone products. We hope that as an outcome of these guidelines the growth in local quarries is stimulated and local economies (and communities) can reap the benefits.



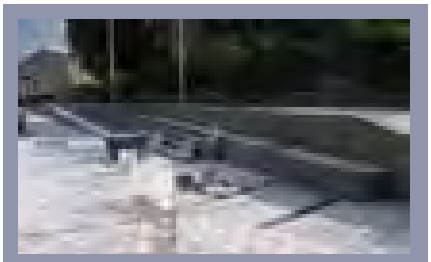
Illustrating paving highlighting a gateway in Aberdare



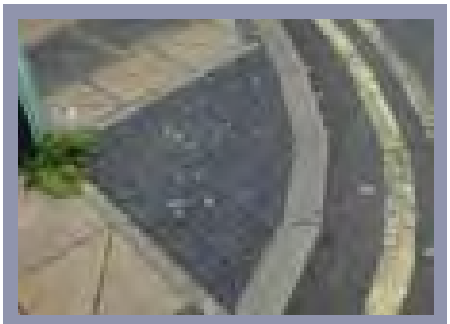
Chester Cathedral - Different materials both define the space and provide an indication of its use



In Oswestry simple paving designs highlight narrow passageways



Well-coordinated materials and varied landscaping at the main square in Merthyr Tydfil



Top Image:
Cutting straight road kerbs to suit tight radii at Brynmawr

Bottom Image:
Road Kerbs supplied to the specified radii – always to be preferred

**Durability**, in many respects is the key to selecting surfacing materials. The street floorscape is an unforgiving place and the weaknesses inherent in sub-quality material become apparent in the course of time. Durability goes beyond the strength of a material. Acceptable materials are those which retain all of their qualities, including colour and texture as well as strength, through time.

Surface materials should help to celebrate the **unique qualities of individual towns.** The design of the streetscape will be based upon a detailed site survey and an assessment of the existing features by the design team that will be turned into an overall concept. The design brief should always include the requirement to emphasise or create local distinctiveness. What this is in each circumstance, is a matter left to the designers, but there are some aspects where useful 'pointers' can be provided.

The streetscape should create a positive setting for feature buildings. In addition, the design of surface materials may create foyers which can indicate how spaces can change to adapt to how certain buildings are used at different times. Surfaces should communicate the nature of their use to all users. Different materials, textures and colours can provide subtle indications of boundaries, thresholds, activities and communicate the use of space. An example for all of the above is how the public realm around a church may not be a traditional public space, but will certainly accommodate public gatherings when a wedding takes place. Surface design needs to consider these types of local minutiae.

# 04 SURFACE MATERIALS

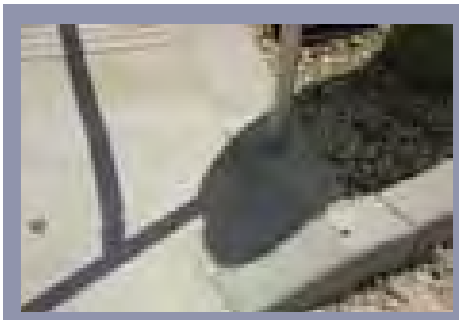
Street surface **patterns should be kept simple**. In particular, patterns created by awkward cuts in material to be avoided as they are difficult to maintain. Furthermore, colour and texture may aid those with sight difficulties providing warnings of obstructions, or hazards.

**Installation** by appropriately trained and supervised operatives has been outlined in more detail in Section 8.0. However, it is important that initial levels of workmanship are of the highest standard to prevent the need for unnecessary remediation in the future. Appendix 2.0 provides designers with additional details on how consideration at the design stage can reduce the amount of maintenance.

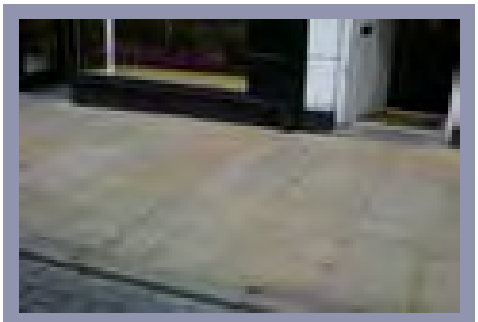
This surface blends a number of different materials. Cuts and patterns are very simple and service covers have been well integrated.

**Streets need to be designed to include all groups** regardless of any physical or psychological impairment. It is estimated that there are 11.7m disabled people in the UK and it should be the intention at the outset of guide to the design of the external environments to ensure that disabled people are not denied access to facilities and services that able bodied people take for granted. There is now a considerable literature along with a legal framework that is designed to ensure that the principle of equal access for all is applied to both, the public and private realms.

This guide is not intended to provide a replication of the guides that are already available. The consideration of the specific needs of the variety of disabled users must be considered as an imperative principle at the outset of any improvement works within the street-works domain with the aim to achieve an environment allowing ease of movement for all, without the need for special arrangements and provisions. *(More detailed guidelines in the Appendix 3)*.



Stone has been cut to allow the materials to respond to the site



These quality materials have been well specified for this street in Chester

Simple drainage in Merthyr Tydfil town centre

It is an essential requirement that surfaces are designed in a way that **water run off is efficient** and that water is not allowed to form ponds or puddles. It is generally the case that the best method of dealing with surface water is the simplest. On this basis full advantage of existing levels and falls should be taken. Levels and falls that create awkward situations should be designed out. Surface water for example should not be directed into paved areas but away from them. For new areas of hard landscaping consideration should be given to installing a Sustainable Urban Drainage System (SUDS). *(Appendix 2 for additional information)*

# 05 STREET FURNITURE

# 05 STREET FURNITURE

**Street furniture is an integral part of our towns. Street furniture includes elements like benches, bins, bollards, bike racks etc. Other street items include elements like signal boxes, railings and CCTV infrastructure.**

Clever use of street furniture and other items can make a town feel comfortable, civilised and enjoyable. Whereas poor use of street furniture and other items can make a place feel confusing, oppressive, inconvenient and tired.

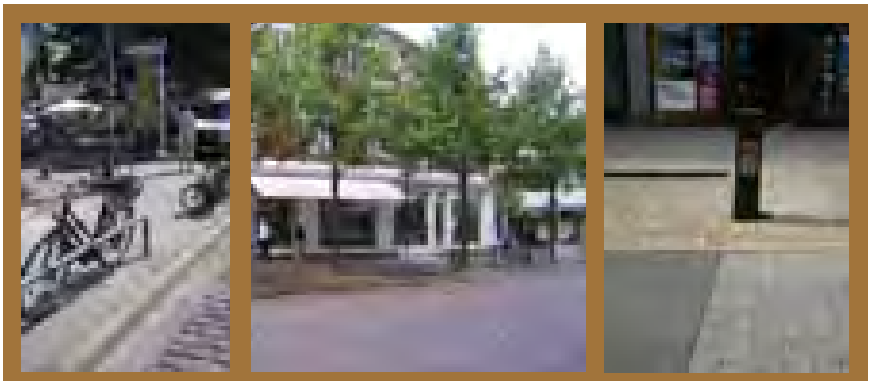
## General principles:

**'Getting street furniture right is key to making Valley towns successful'**

- A thorough audit of all existing street furniture and street items should precede any new public realm improvement scheme
- Local Authorities should include only the street furniture that is absolutely necessary
- Furniture and other items should always be multi-purpose to reduce clutter (i.e. could a tree perform the same role as a bollard?)
- Furniture should be coordinated throughout the town (i.e. be of the same style)
- Furniture should be simple, timeless and selected specifically to suit the character of the town
- Furniture should be robust and easy to maintain and the Local Authority should have staff that have the appropriate skills to maintain the equipment
- Furniture should be appropriately positioned (e.g. benches placed to enjoy views, columns located not to obstruct movement and so as not to impede views etc)
- Where appropriate, items such as lighting and CCTV should be mounted on buildings
- CCTV can play an important role in combating crime but is not a more important element than others in the street. Siting of CCTV infrastructure needs to balance aesthetic impact and effective surveillance
- Street furniture does not have to be selected from catalogues, but can be built locally using local labour and materials
- The integration of natural materials should be considered where appropriate
- The colour of street furniture needs to be chosen with great care; furniture in darker, subtle colours is particularly well suited to Valley Towns

These five columns represents how towns can accumulate items without thought about their aesthetic impact

## Specific Guidance



Trees and street furniture can perform the role of bollards by keeping cars off the kerb while multi-purpose bollards are used to display traffic orders

Building mounted lighting units reduce the amount of items in the street and highlight buildings after dark

**Lighting columns** should be of human scale, it is likely that where they are higher than two storey buildings that this is no longer the case. The opportunities offered by the use of lighting columns to reduce clutter are extensive as they can host CCTV cameras, finger posts, highway signs, planting, bin mounts, traffic lights etc.

Lighting columns in Blaenavon accommodate a range of other items without looking overloaded

Along with highway regulation signs, **bollards** are one of the most common forms of street clutter.

It is evident in every town in the Heads of Valleys that they are being deployed as passive traffic calming, which visually unattractive and unacceptable. A zero tolerance approach to illegal parking should be enforced by Traffic Wardens, PCO's and where possible CCTV. Bollards which perform a dual function as bike lock-ups are an opportunity to reduce the amount of items in the street. Another opportunity could be to host appropriate standard signs on a limited amount of bollards. This has been used to significant effect when displaying information concerning parking restrictions and has been successful in Shrewsbury.

Generally, bollards which are of steel or timber construction will be more appropriate to the character of towns in the Heads of Valleys. Dark and muted tones should always be preferred.

**Infrastructure mounted on buildings** presents another way of minimising unnecessary street clutter and add to overall quality of the built environment. However, some caution is needed when taking this approach, so as not to detract from sensitive buildings. To install a sign, light or CCTV onto a building it will be necessary to obtain a 'Wayleave' from each landowner and tenant. This can be a lengthy process which contains some costs for consultation and negotiations. However, it can be worthwhile as the final result can have a huge benefit on the quality of townscape.

The appropriate use of planning applications and design guidelines help ensuring that facades are uncluttered and attractive with Improvement Grants and town centre management supporting this further.

# 05 STREET FURNITURE

**Planters** should always contain plants! Ones that do not make a town look tired and neglected. Planters can be used in place of bollards to delineate space, especially on streets which function as a shared space. Products are available which also serve as bike lock-ups and these should be encouraged.

**Guard railings** are used to mitigate risk, either because of a change in level or to prevent pedestrians from stepping into the highway. By their very nature, railings are generally impediments to pedestrian movement. They are designed to protect pedestrians, not by withstanding vehicle impacts, but rather by preventing pedestrians entering the highway. Railings contribute to greater driver certainty and thus higher traffic speed. The consequence of this is that railings can contribute to making town centres feel less convenient for pedestrians. Railings should be used sparingly and their installation needs to reflect the particular situation. However, a sparing use of railings can only work if implemented within a range of measures to lower vehicle speeds.

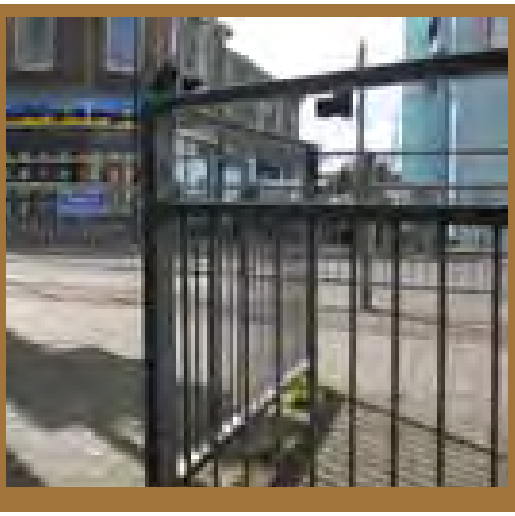

This welcome sign in Blaenavon is coordinated with the wider branding guidelines for the town and helps make the town feel distinctive

**Signal boxes** should be located in unobtrusive places, in Blaenavon they have been recessed into walls to great effect. Otherwise, and depending on the sensitivity of the context they could be considered as canvasses for public art. They should not impede pedestrian desire lines.

**Bike racks** should provide convenient, secure parking for bicycles and should thus be positioned in a prominent location. Care needs to be taken that bike racks do not obstruct any patterns of movement. Where another multi-functional piece of furniture is installed, functions can be combined. Bike racks should always conform to the rest of the street furniture in the town.

**Wayfinding furniture** and street signs should convey the town's image and style in a simple and appropriate manner. There are opportunities to incorporate public art and to integrate signage with town branding, which has been achieved with excellent effect in Blaenavon. In Aberdare the street

Clear furniture layouts help maximise the usable space and provide structure to the space



Standard galvanised guardrails are visually at odds with the need for distinctive places where pedestrians have priority

If railings are necessary, they should tie into the furniture palette of the town

signs, although under-maintained are non-standard, attractive and distinctive.

**Tree grills** should be consistent throughout any town, unless there is a good reason not to do so. Types of tree grill which are simple and easy to maintain are the most appropriate.

The need for effective **CCTV** needs to be balanced against the visual impact it can have on streets and buildings. CCTV is only one of the means by which Heads of Valleys town centres can be made safer. Trees in towns are important and CCTV should not dictate that trees are all removed. Wherever possible, cameras should be mounted on existing columns or on buildings. Deliberately making CCTV visually prominent is not acceptable practice and there is no research that confirms there is a positive link between high visibility CCTV and reduced crime rates. Ideally, new luminaries and CCTV should be part of a lighting and CCTV strategy.

In Shrewsbury, building mounted dome cameras have effective coverage, but are not intrusive

In Queenstown, New Zealand bespoke street furniture using local materials is cost effective, sustainable, robust and distinctive

**Style** is always a subjective aspect, but evidence shows that simple and timeless furniture ages more gracefully than contrived designs. Towns in the Heads of Valleys, which have Victorian/Edwardian character, do not suit contemporary or pastiche designs particularly well. In particular, Valley towns do not 'wear' stainless steel designs very well. Towns like Bargoed have had street furniture which, unfortunately, has aged quickly and this contributes to a wider sense of malaise. In Bargoed, blue lamp columns in particular have been used to try to define the image of the town. Best practice suggests that a co-ordinated scheme of works which includes all of the elements of good practice in this document, will define image – not just a single item of furniture.

**'Simple and timeless furniture ages more gracefully than contrived designs'**

Ideally, furniture that suits the town now could have suited it 20 years ago and will probably suit it in 20 years time.

Style can be determined at a local level; it doesn't need to be selected from a supplier's catalogue. In particular, benches and planters could be constructed using local materials and labour. These types of intervention are not only extremely robust, but cost effective and promote local supply chains.

# 06 TREES AND PLANTS IN TOWNS

**Trees and (to a lesser extent) shrubs, play a pivotal role in the streetscene, and there are compelling reasons why trees are so important in the townscape.**

### Visual Amenity

Plants and trees have a significant impact on the public realm and its visual amenity and play a vital part in strengthening the character of a place. Plants and trees provide colour, texture and shade. They help to soften an environment dominated by buildings and hard landscape and have a humanising effect. The aspect of seasonality is important as it provides a changing urban environment and represents natural processes within our towns.

### Economic value

(Treharris) Specimen trees can form focal points and provide orientation

Trees help to enhance the visual amenity of a space and thereby have a direct impact on the economic values of the built environment such as house prices and rents. It is highly likely that properties in tree lined streets are worth more than in similar streets without trees. Although no studies have been found for the UK, a study in Chicago found that property values were 18% higher. Also, the potential monetary value of established and mature trees should not be underestimated. In this respect the CAVAT scheme (Capital Asset Value for Amenity Trees) has been introduced in London. The London Tree Officers Association assessed that many trees are being blamed for subsidence in homes around the UK capital city and are subsequently taken down. As an example a Victorian plane tree in the prestigious area of Mayfair, London, has been valued at £750,000.00, more than 3 times the cost of the average UK house.

Despite this, there has been a marked reluctance to plant big trees until recently, with Welsh valley towns being no different to many other towns and cities in the United Kingdom. Great trees have shaped some of our urban landscapes and it is easy to recognise that opportunities have been missed.

### Health and Climate Change

“Spaces that are softer, greener, more organic and natural will store water and are critical to modifying urban temperatures.” (CABE, Public space lessons: Adapting public space to climate change, p.2)

Trees are important in allowing our towns to adapt to climate change. One tree can provide enough oxygen for the daily requirements of ten people at the same time as retaining carbon. Trees have a positive impact on the incidence of asthma, skin cancer and stress-related illness by filtering out polluted air, reducing smog formation, shading out solar radiation and by providing an attractive, calming setting for recreation. Also, trees and plants play a vital role in the urban ecosystem, by providing habitat and supporting a great variety of wildlife.

Due to canopies creating shade and evaporating water, plants are able to reduce urban temperatures by 4°C. In addition, they have the capacity to absorb floodwater which is becoming continuously important in urban areas with a rising amount of surface being sealed off.

## General principles

The choice of any trees and shrubs should consider the following aspects and their impact on plants:

**'Should it be necessary to remove a tree to facilitate utilities such as CCTV, drainage and lighting, then a tree of a similar size should be planted close by'**

- The advent of structural tree soils, root cells and root barriers, which protect service corridors, has overcome the problem of root damage to infrastructure and property.
- Where trees are in close proximity to buildings, species should always be selected which are unlikely to exacerbate subsidence of adjacent properties. Species such as willows and poplars should therefore be avoided and light foliaged species such as birches should be favoured close to fenestration.
- Where trees are to be planted close to buildings, or indeed, passing traffic, trees with a more columnar or fastigiate form should always be selected.
- Vandalism should not be seen as a reason not to plant trees, despite street trees often being an easy target.
- Most street trees to be specified are likely to be of an ornamental nature. However, on the occasions where a native tree is specified, every effort should be made to ensure that it is of UK provenance
- In the relative confines of a Welsh valley street, 'blossom' trees, such as cherries and mountain ash varieties are often the optimum. However, where space permits, every effort should be taken to plant grander trees and at a larger size.
- CCTV and its effects need to be considered at design stage with cameras and planting being designed with any potential effects in mind.
- Should it be necessary to remove a tree to facilitate utilities such as CCTV, drainage and lighting, then a tree of a similar size should be planted close by.

Trees have an importance in softening the hard landscape

## Specific Guidance

Above: How trees have been removed to make way for CCTV columns

Below: Manipulated photo indicating how the streetscene once looked

Often, the proximity of public utilities, street lighting, drains and CCTV determine whether or not trees can be planted in a street. The advent of **root barriers**, which protect service corridors, mitigates this problem. A more collaborative approach which uses these products is now needed to ensure that a more balanced result is achieved. Root barrier systems, as well as formal tree pit drainage and irrigation ensure that trees can be planted in close proximity to street lights, drainage and other utilities.

In urban situations where tree roots are likely to be in close proximity to roads, kerbs and pavements, structural tree soils such as Metrosand, Urban Soil, WBB, Arborsoil and Heicom Tree Sand, along with products such as Root Cells, should always be specified. Similarly provision should always be made for formal pit drainage along with pit irrigation.

Where trees are to be planted **close to buildings or passing traffic**, trees with a more columnar or fastigiate form should always be selected. A number of leading UK nurseries are now breeding and promoting a range of trees, specifically for streets, which meets these criteria.

It is essential that **all trees planted within the street are of sufficient size** when planted. In this respect perhaps the most commonly planted size of trees are Advanced Nursery Stock (16-20cms girth). To combat vandalism no specimen trees smaller than this should be specified within the public realm. Furthermore every effort should be made to plant much larger semi mature trees (25-40cms girth). Not only will trees of this side withstand the effects of vandalism better, but they will transform the appearance of the street and create a sense of well being at the same time.

In several Heads of Valleys town centres there is an ongoing **conflict between trees and CCTV** cameras, with the inevitable result that pavement trees have been removed to facilitate camera visibility. The loss of these trees in towns like Tredegar has had a significant detrimental visual impact on the streetscene. Based on "Home Office Research Study 292 - Assessing the Impact of CCTV" (Gill et al, 2005), the real value of CCTV in combating urban crime is not clear. Furthermore, to prevent unscrupulous removal of trees, it is recommended that a scheme, similar to that of Capital Asset Value for Trees (CAVAT) is introduced throughout the Heads of Valleys.

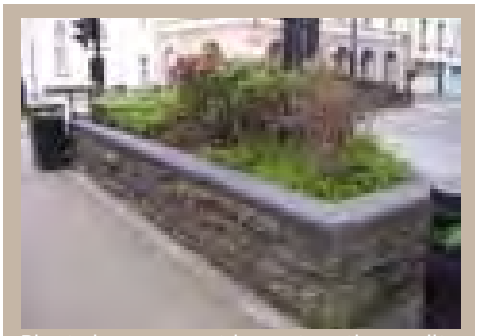
### Recommended Tree Species

Appropriate tree species for streets and the urban environment are already well documented in numerous reference books and journals and include widely used species such as Platanus hispanica (London Plane), Tilia vars (Lime cultivars), and at a smaller scale, Sorbus aucuparia vars (Mountain Ash cultivars), Sorbus aria vars (Whitebeam cultivars) and

**'It is essential that all trees planted within the street are of sufficient size when planted'**

Prunus vars (Cherry cultivars). Subject to the criteria above, all of these would be appropriate for planting in South Wales valley towns. Thus it is not the intention of this report to state the obvious, but to recommend some other species which might be appropriate and which could give some individual distinctiveness to the streetscene in each town. In this respect the following may also be considered:

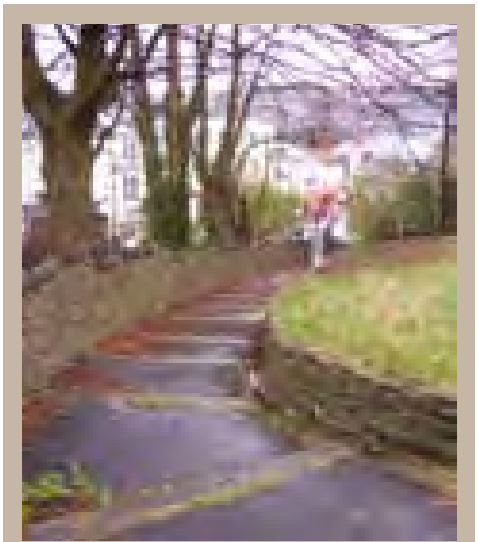
**Ginkgo biloba** - long lived and very resistant to air pollution with its striking fan shaped leaves and autumn colour.
**Liquidamber styraciflua**- good autumn colour and withstands urban pollution; prefers a warmer environment and dislikes strong winds so would adapt better to the lower and more sheltered valley towns.
**Pyrus Chanticleer**- controlled pyramidal form, it remains in leaf for most of the year, and probably longer than any other deciduous tree.
**Metasequoia glyptostroboides** - its controlled pyramidal form, together with its tolerance of damp conditions makes this a potentially good choice for South Wales valley towns.
**Carpinus betulus 'Frans Fontaine'** - a good columnar form that tolerates soil compaction and whose roots do not affect roads and buildings.



Plants have a great impact on the quality of the public realm; regular maintenance is an important factor.

### Ornamental Shrubs, Ground Covers and Grasses

Within busy high streets ornamental shrubs, ground covers and grasses have, in most cases only a limited role to play. Opportunities to introduce this type of planting occur where the street widens out to include squares and sitting areas.



Trees and other landscape elements add to the unique character of a place.

Once again much has already been written about appropriate shrubs and ground covers for the urban environment. Key factors in selection of species include hardiness, ability to withstand vandalism, tolerance of salt spray (if adjacent to roads), seasonal interest and, above all, low maintenance. Designers should be encouraged to select from a wider palette of plants which include a range of perennial plants and grasses, some of which have evergreen characteristics. Subject to location the following species, amongst others, should be considered:

- Carex vars
- Euphorbia vars
- Geranium vars
- Hemerocallis vars
- Heuchera vars
- Pennisteum vars
- Polygonum vars
- Sedum vars
- Tiarella vars

### Annual and Bedding Plants

Although relatively high maintenance, bedding plants and annuals have an important role in the urban environment, but only if the mechanism is in place to maintain them to a high standard.

The colour and vibrance provided by hanging baskets and mass planting of troughs can transform a dreary street or road junction during the summer months.

### Tree Management

Several recent high profile cases have given trees a bad press and jeopardised the public's perception of trees as an amenity, particularly those growing within the built environment. While any tree can fail, given sufficiently severe weather conditions, very few do so as a percentage of our tree population. Furthermore, most of those that have caused harm in recent years have done so for identifiable reasons. Had effective tree management systems been put in place tragic deaths and injuries leading to costly court cases and compensation payments could have been avoided.

Resources and funding need to be put in place in order to allow for regular inspections of all street trees by qualified arboriculturalists.

The use of root barriers and root cells prevents damage to surface materials and service ducts

Trees have a significant impact on the quality of our surroundings; they provide visual interest and a constant change with the seasons

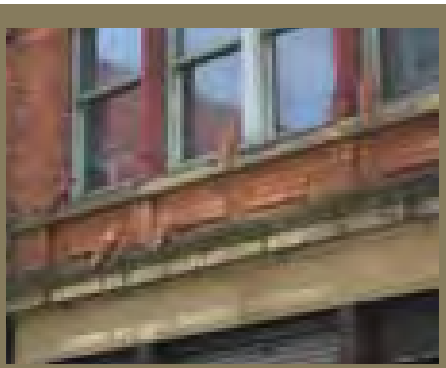
# 07 PUBLIC ART

***Public Art* refers to all pieces of art that have been created specifically to be displayed in public spaces where they are visible for the public audience. The intention of public art should be to make people observe and reflect and to add richness to the public realm.**

**'Good public art engages people visually and intellectually'**

Public art can communicate the history of its context or convey wider themes people are concerned with. Successful art leaves a lasting impression with people and helps make towns rich, diverse and interesting by highlighting and elaborating on particular aspects and peculiarities. Good public art engages people visually and intellectually. Interactive artwork offers additional stimulation by adding a physical, sensual or tactile level to the experience.

## General Principles:



Micro-scale building art in the northern Quarter, Manchester

- Each town should have an individual public art strategy. This should be entwined with either a regeneration strategy, a public realm strategy or ideally, both. The strategy must start with reviewing what public art any given town already has. Often, public art is stimulated by funding availability. A strategy will prevent art being added to a town ad-hoc. Instead pieces should be added and the strategy is implemented gradually, as funding becomes available.
- Public engagement helps the acceptance and understanding of the artworks by the public and is encouraged.
- Public art cannot be used in isolation to define the image of a town, however, it can support efforts to strengthen a town's identity if it is derived from and embedded into its context.

Bargoed: Public Art linking the town to its industrial past

- Town centre public art should incorporate community driven projects, professional pieces and collaborations. Location, context and local significance should determine whether the outcome is produced by the community, an artist or collaboration. This is where the strategy should inform the briefs for the works.
- Public art in towns should work at a variety of scales, from afar and up-close. This means that it should incorporate highly visible pieces as well as items that are relevant at the micro-scale. Too often, public art in the Heads of Valleys focuses on the former at the expense of the latter. Opportunities to add richness to these towns in a cost effective manner are being overlooked.

# 07 PUBLIC ART

Barry, Glamorgan: A good example of surface mounted public art with engravings displaying the history of trades in the town

- Processes for procuring public art should be bespoke to the context. Such processes can include design competitions, agency managed works and collaborations.
- Long term maintenance is an essential consideration that should be integral to the brief and demonstrated in the final design.
- Public art should attempt, wherever possible to use local and/or renewable materials and avoid processes in fabrication that involve using large amounts of non-renewable energy. All paint should contain low content VOC's or be organic based paints.
- Most public art is permanent and fixed to a place. However, it can also be of a temporary nature, ranging from temporary installations to even performances. Temporary art offers the great potential for experimentation.

## Specific Guidance

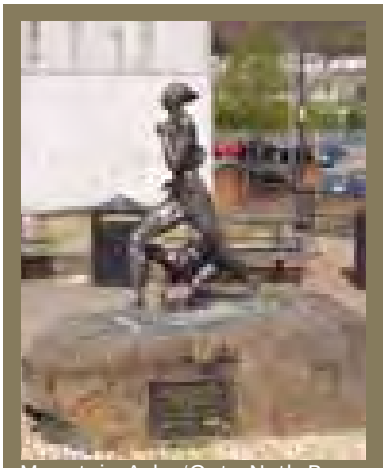
**'Processes for procuring public art should be bespoke to the context'**

**Sculpture** is possibly the most common form of public art. It has an important role to play, but should not be relied upon as the sole means of bringing art into a town. Sculptures can take many forms, but the most successful are those which represent something that the local community has an affinity with (i.e., Guto Nyth Bran in Mountain Ash) or forms that are playful and interactive (like the 'Singing Ringing Tree' in Burnley by Tonkin Lui Ltd).

**Lighting** is an innovative way of making a town feel interesting, unique and also safe. Using lighting as a form of art creates the potential to exploit a wide range of colours and visual effects. The most overlooked form of public art is architecture. All of these towns have feature buildings and lighting can be used to highlight them. Lighting can also be embedded in street surfaces to make them more interesting. This allows low energy LED's to be used.

The location of public art is not limited to the spaces between buildings; it can also be accommodated on **built frontages**. If this is the case 'wayleave' agreements with owners and maintenance agreements are essential

**Surface mounted** public art is an interesting and well used way of allowing the street to tell a story. For this to work well it needs to be very clearly communicated, so that the key message can be conveyed quickly. Such works need to be easy to maintain and not present hazards to people with impaired mobility.



Mountain Ash: 'Guto Nyth Bran, a legendary runner linked to the town

Bideford, Devon: Along the quay wall, little insets of objects associated with "memory"

# 08 MAINTENANCE & MANAGEMENT

# 08 MAINTENANCE & MANAGEMENT

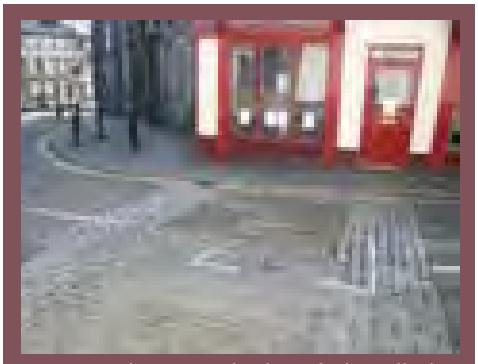
**Effective long-term maintenance and ongoing street management is essential to ensure that the next generation of street improvements in the Heads of Valleys town centres are the last for a considerable period of time.**

Many of the negative aspects of the public realm in the Heads of Valleys relate to inadequate long-term care. Improving the relationship between good design and effective maintenance is crucial. This section outlines some of the current problems and suggests some potential ways forward.

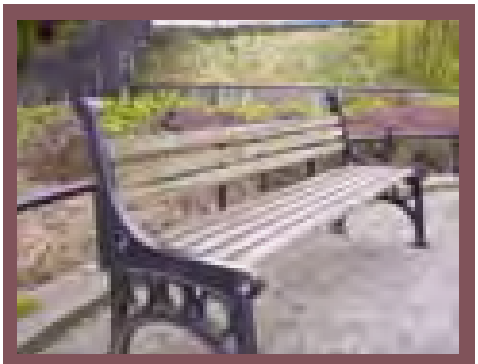
## General Principles

- Many maintenance liabilities can be minimised at the outset with the choice of appropriate materials and the correct method of installation.
- An early dialogue with utilities companies needs to be established so that future repairs do not have adverse effects on the appearance of the public realm.
- It is absolutely essential to the long term effectiveness of new public realm schemes that sufficient stockpiles of materials are maintained.
- The limited opportunities for revenue funding are inhibiting the prolonged quality of our streets and should be subject to a comprehensive review.
- All repairs and reinstatements (whether instigated by the Local Authority or utilities companies) need to be carried out with like-for-like materials and a high level of workmanship. Local Authorities need to invest in training their workforce to guarantee high standards of repair and train inspection staff to ensure works are visually appropriate.

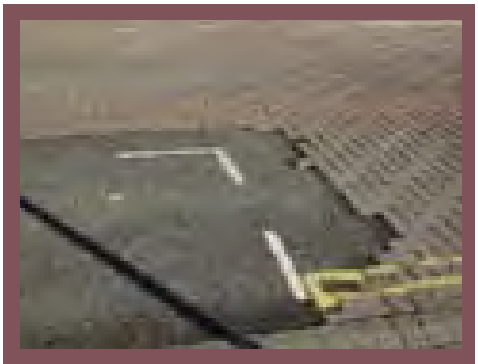
Insufficient cleansing regimes cause street furniture to look neglected; this has a negative impact on the wider area



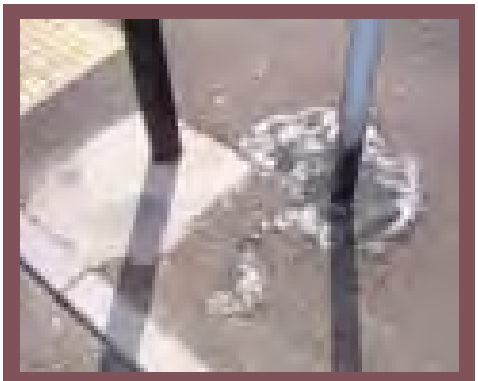
Inappropriate methods of installation can result in considerable maintenance liabilities if requirements such as load bearing capacities are not being considered carefully



Although the style of street furniture is very adequate in its context, the lack of maintenance stops people from using the bench and it looks neglected



Example of how temporary fixes become permanent. These blocks are standard materials and need to be replaced on a like for like basis.



Patchy repairs can seriously undermine the quality of the floorscape

- Monitoring and repairs are too focused on safety and minimising exposure to claims. All repairs need to be safe and aesthetically appropriate. Any patch repairing (even temporary) of stone or pre-cast concrete with tarmac or poured concrete is not acceptable.
- Public realm design needs to be four-dimensional, i.e. consider the aspect of time, and demonstrate how well the scheme will age and how it can be effectively maintained. Maintenance officers should have a positive contribution to the design process at the outset.
- Soft landscaping needs to be well maintained to prevent towns looking tired and under-maintained.
- Monitoring of the public realm is essential and already formalised in many of the towns. However, each Local Authority should review other ways of monitoring to determine their own effectiveness.
- Maintenance budgets for town centres should be kept separately in order to ensure a quality of repairs.

## Specific Guidance

**Stockpiling** of materials is standard practice and allows Local Authorities to maintain the quality of a street with like-for-like materials. However, there is evidence in the Heads of Valleys that this has not occurred and as a result stone or pre-cast materials are continually being replaced with tarmac. This is gradually diluting the impact of the initial investment. This practice is unsustainable. This scenario suggests that Local Authorities do not keep a stockpile of adequate materials.

**'Each Local Authority needs to maintain reserves of material of at least ten percent'**

Each local Authority needs to maintain reserves of material of at least ten percent. We recommend that the Heads of Valleys Programme Board, Welsh Assembly Government and the five Local Authorities consider initiatives for the joint stockpiling of those materials that are likely to be common to all towns (such as pennant sandstone). This links with the creation of a Heads of Valleys purchasing consortia which is outlined in more detail below. The topic of stockpiling needs to be examined further by a study in its own right in order to establish best practice.

Successive 'waves' or poor quality repairs have a damaging impact on the image and attractiveness of our towns

The current **funding arrangements** for public realm improvements inhibit streetscape quality in the Heads of Valleys. Funding is a complex subject and beyond the scope of this publication to consider in detail. Essentially, there is funding available for capital projects, but resources for ongoing maintenance are extremely limited. This matter is creating unnecessary tension between design and regeneration officers and those concerned with maintenance. For these officers to work together more effectively ways of funding maintenance need to be created. De-cluttering streets, good quality installation, effective stockpiling and the use long-life materials can help to minimise the long term cost of maintenance, but revenue will always be required to keep our streets in good condition. Using maintenance regimes that are proven to work well are absolutely necessary if the Heads of Valleys authorities invest in more expensive materials that are locally sourced but have a very long lifespan.

# 08 MAINTENANCE & MANAGEMENT

We recommend that the subject of streetscape funding is comprehensively reviewed. Part of this review should also consider innovative funding practices that are being employed to maintain streets elsewhere. Such considerations could include combining build contracts with a long-term maintenance responsibility. This can incentivise higher standards of construction and enable contractors to take long-term stewardship.

If public realm improvements can help mitigating the impacts of a development, Local Authorities may be able obtain funds applicable to streetscape maintenance from s.106 contributions relating to planning applications over a certain threshold within or adjacent to the town centre. Where these are applicable, they should be spent according to a previously agreed public realm strategy formed by a joint working party of officers.

Finally, another possible approach may be to apply for Welsh Assembly Government authorisation to implement s.74(a) New Roads and Street Works Act 1991 (as amended by the Transport Act 2000) this enables a Local Highway Authority to charge utility companies for prolonged occupation of the highway. Any surplus (after administrative costs) may be used for transport or other related areas, such as maintaining the public realm.

**'There is evidence that poor quality repairs are degrading the quality of our streets in the Heads of Valleys'**

The long term future of the new streetscape scheme in O'Connell Street, Dublin has been secured by tying in the initial contractors into a long term 'build and maintain' arrangement. This type of innovation is something that should be researched further as a possible model for streetscape maintenance in the Heads of Valleys

The **quality of repairs and reinstatement** is a significant issue. One of the factors compromising the longevity of good quality streetscape concerns the reinstatement of openings by statutory undertakers. The Transport Research Laboratory has found that streets with a large number of utilities have a 30% shorter lifespan as a result. Another factor concerns the quality of repairs by Local Highway Authorities. In both cases there is evidence that poor quality repairs are degrading the quality of our streets in the Heads of Valleys.

The Traffic Management Act 2004 is being rolled out in Wales from April 2008. The Act prescribes that "it is the duty of the undertaker by whom street works are executed to reinstate the street… Any undertaker who fails to comply with any provision of this section commits an offence and is liable on summary conviction to a fine." This has the potential to help Highway Authorities police utility companies and in doing so manage their streets much more effectively.

One of these potential monitoring tools within the Act allows Local Authorities to insist that statutory undertakers apply for a permit to carry out any works. A sub-group of the County Surveyors Society is currently debating the use of permits in Wales and its findings should demonstrate whether permits can assist with street management.

# 08 MAINTENANCE & MANAGEMENT

**‘Local Authorities need to identify skills gaps and offer specialist training’**

The DfT and the Welsh Assembly Government have released a comprehensive set of guidelines, to be read alongside the Traffic Management Act 2004. The document, entitled: *Working Together: A Good Practice Guide to Managing Works in the Street* (DfT, WAG May 2007) recognises that “it is important that maintenance and reinstatement are carried out to a high standard”. It is not appropriate for this publication to repeat all of the recommendations of the above Guidance and recommend that this document forms the cornerstone of good practice with regard to repairs and reinstatements. However, worth highlighting here, is the positive impact that suitably trained operatives and supervisors can have when they are allowed to work with the appropriate materials. Local Authorities need to identify skills gaps and offer specialist training. At the most basic level all site operatives and supervisors utilise the Practical Guide to Street Works (DfT, 2006) to ensure high standards of workmanship.

Managing Works in the Street recommends that Local Authorities develop locally agreed performance criteria to maintain or improve quality. Aesthetic impacts of street management must form part of those criteria.

Presently, there are plans for a major gas main replacement programme and an ambitious plan to install new fibre-optic cabling to facilitate highest capacity broadband to the Heads of Valleys area (and the rest of Wales). It is absolutely essential for Local Authorities to liaise with the utility companies at the earliest opportunity concerning any future substantial schemes. All public realm investment decisions must be preceded by senior discussions with all utilities companies. It is imperative that these discussions are conducted with key strategic decision makers. Decisions about significant investment in utilities infrastructure can be influenced by the public sector, if brokered early enough. In some cases, there can be opportunities for significant cost sharing, with utilities paying for excavations and Local Authorities meeting the cost of reinstatement.

Public realm design must take into account the **impact of time on any given scheme and how the quality of the design can be maintained**. **For this to be effective a collaborative design process is essential.** New street furniture needs to follow the principles set out in Section 5.0, yet the Local Authority need to be able to maintain it. Street furniture, especially lighting, should be readily available and easy maintain, but overly standardised approaches to furniture selection based on ease of maintenance alone is not an acceptable solution. We recommend that information on maintenance techniques be shared between the five Heads of Valleys Authorities.

# 09 IMPLEMENTING THE GUIDELINES

# 09 IMPLEMENTING THE GUIDELINES

**This document outlines a broad range of measures which, if implemented, will significantly improve the quality of the public realm in the eleven towns in the Heads of Valleys Programme Area.**

The research behind this publication has identified that there are practical steps that can be taken which will boost the effectiveness of street design and management significantly. Our findings in this chapter are drawn from our research, site visits, audits of Local Authority street responsibilities and also echoes many of the findings of the seminal research paper *Paving the Way* (CABE & Department of Communities and Local Government - DCLG, 2002).

## General Principles

- A formalised **collaborative approach** is required to enable professionals, departments and agencies to work together more effectively.
- Create new **multi-disciplinary** street teams responsible for design, management, maintenance, funding applications etc.
- All professionals involved in the creation and management of streets need to understand the importance of the **aesthetic agenda**, which now needs to be given higher priority.
- A **long term view** is the only way of effectively managing our streets.
- **New structures** need to be created in the five Local Authorities manage streets.
- There needs to be **clarity about who is in charge** of the streets in any given town. The person who is in charge needs to be sufficiently senior to be able make decisions.
- Create **group purchasing arrangements** to reduce cost and manage stockpiles.
- Future **funding approvals should be conditional** on the implementation of these guidelines and *Traffic Management and Streetscape.*
- **Involve Design Commission for Wales** in the review of new schemes which represent a significant public realm intervention.
- Commence a process of awareness through commitment to recognised **training programmes** for some staff and informal workshops for others.
- To achieve the goals and targets set out in this report, there needs to be **significant commitment** from each Authority.

# 09 IMPLEMENTING THE GUIDELINES

## Specific Guidance

### Collaboration

The problems we have identified in the town centre audits summary documents are, in most cases, not the result of wilful neglect of the public realm. It is the result of a lack of coherent corporate stance regarding the design and management of town centre streets.

The current malaise can be depicted by a scenario where several different groups of committed officers are fulfilling their duties, whilst unknowingly undermining the efforts of others. The public realm is therefore being created by a sequence of, at best, negotiated compromises, or at worst open professional hostility or ignorance of others' project objectives. The evidence of this is on the ground and this needs to be addressed for Heads of Valleys towns to reach their potential.

**'It is essential that each of the five Heads of Valleys Authorities bring their different professions and specialists together to create a culture of collaboration'**

Public realm design is by no means the sole province of landscape architects, urban designers or public artists. Similarly, public realm management is not the sole responsibility of maintenance engineers. Design and management of the public realm is the responsibility of all who have a stake in our streets. Officers with these different roles, views and specialisms must be allowed to work together more effectively.

Good public realm design and effective stewardship is an extremely complex task and it is beyond the abilities of any one particular professional group to complete the process successfully. Therefore, it is essential that each of the five Heads of Valleys Authorities bring their different professions and specialists together to create a culture of collaboration. There are models for how this has been achieved in the Case Studies in the Appendix.

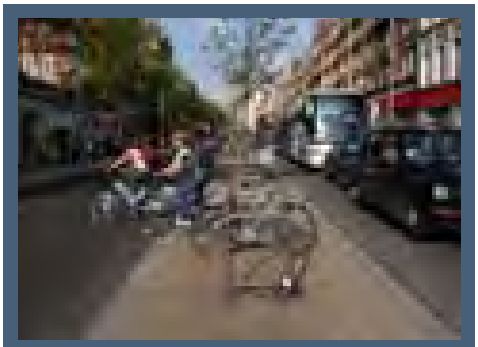
Significantly, LTN01/08 *Traffic Management & Streetscape* describes in detail the process for creating and maintaining good streets and it is important that this is followed. An overview of the design process with its flows, inputs and links is given on page 12 of the document.

Recognising the need for and benefits of professional collaboration is one thing, achieving it is another. Large organisations tend to have divisional structures based on professional disciplines and often officers from different disciplines have little contact with one another (Paving the Way, 2007). To counter this, we recommend that each of the Heads of Valleys authorities review the way that they design and manage their streets.

For proper collaboration to occur it needs to start at the outset of a scheme and continue into on-going management. *Paving the Way* describes the solution to this problem as:

# 09 IMPLEMENTING THE GUIDELINES

**"The way ahead is the formation inter-disciplinary teams, specifically briefed to collaborate with one another in bringing forward designs. Such teams should become the rule, not the exception, and be active at the earliest stages of project development. This is crucial: more than half the respondents to the 2003 IHT survey reported that highways and transportation professionals became involved at too late a stage in projects. Interdisciplinary teams may be created by wholesale restructuring of divisions or through a more ad hoc, hands-on approach to the deployment of staff by senior managers. This approach should be applied to projects of all sizes, recognising that the dismal public realm of many towns and cities is often the result not of one major mistake but myriad smaller ones."** (*Paving the Way*, CABE & Department of Communities and Local Government - DCLG, 2002)



The result of vision and strong leadership (Kensington High Street)

It is not just technical officers who need to understand the principles of good urban design and the impact that their decisions can have on the future success of a place. Assembly Members, Councillors, Senior Officers, Welsh Assembly Government Officials and local communities all have a crucial stake in this process. Significantly, the cause celebre of good street design, Kensington High Street, was driven by an enlightened elected member, Councillor Daniel Moylan, who understood the importance of designing the street that looked good and worked for pedestrians as well as vehicles. His leadership was essential to the implementation of the new street. We need to empower our own decision makers to be able to drive forward these changes.

Everyone working on streets should have a basic understanding of what makes good urban design. Each Local Authority should expand the number of transportation professionals with an understanding of the principles of good urban design. This should help to inspire and empower transportation professionals to give them the confidence that they don't have to take on more responsibility, but to work differently. After all, they are as important in creating good places as landscape architects and urban designers. Capita have commenced this process with an introduction to engineers on the implications of LTN 01/08. In England a series of 25 'Streets for People' training days that were held in various towns and cities from 2004 to 2006. These urban design workshops for highways and transportation professionals were sponsored by CABE and English Heritage, and managed by the Institution of Highways and Transportation (IHT). This process needs to be mirrored in the Heads of Valleys and across Wales.

Collaborative training courses are helping to break down professional barriers

We recommend that a series of workshops be arranged to accompany this publication. The purpose of these sessions will be, primarily to equip a range of professionals with the basic principles that they will need to implement these guidelines. In addition to this, we recommend that each Local Authority consider investing in key streetscape decision makers. The Public Realm Information Advice Network (PRIAN) offers a

comprehensive Professional Certificate in the Design and Management of the Public Realm. The course is now accredited as CPD for IHT members. It has recognition in England from CABE and English Heritage and this should be echoed by support from Design Commission for Wales and the Welsh Assembly Government. In addition, University of Westminster are launching a new Post Graduate Certificate Street Design and Management in Autumn 2009.

**New Ways of Working**

The approach outlined above will lead to the creation of new project teams. The purpose of these teams will be to blur the traditional professional distinctions and departmental barriers and set up groups of officers which have a clear set of objectives. Their role will be to implement best practice, and latest street design guidance, particularly LTN01 08 *Traffic Management & Streetscape*. These teams should be established with regards to the requirements of each particular project and with a clear set of objectives at the outset. Typically (but not exclusively) these teams could include the following at the outset and/or appropriate stages:

- Planners
- Landscape architects
- Arboriculturalist
- Highway Engineers
- Conservation specialists / Archaeologist
- Urban Designers
- Road Safety Officers/Safety Auditors
- WAG Regeneration Managers
- Community safety/police
- Drainage Engineer
- Lighting Engineer
- Procurement specialist
- Cost consultant
- CDM co-ordinator
- Construction Project Management – Clerk of Works
- Artists
- Contractors
- Economic development specialists
- Regeneration officers
- Local Accessibility Officers
- Town centre managers
- Public/stakeholder engagement
- Statutory undertakers

# 09 IMPLEMENTING THE GUIDELINES

Throughout our work we have often asked the question “Who is in charge of the streets in this town?”, to which we have rarely been given an answer. To fulfil this remit, these street teams need to be led by someone responsible for all aspects of street stewardship in any given Borough and be sufficiently senior to be able to make important decisions and provide leadership. This officer should be visible and accountable and link the activities of their team with other key officers like regeneration managers, town centre managers and other agencies like WAG, the police, Keep Wales Tidy and local access groups. Their mandate will be to implement the principles in this document, Creating Sustainable Places, *Manual for Streets*, *Traffic Management and Streetscape* as well as *Traffic Signs Regulations and General Directions 2002* (TSRGD) and all of the other guidelines on street design.

Once established, the new street design teams from each Local Authority should not work in isolation. We can see real benefits in having a Heads of Valleys Street Design Forum. The purpose of this forum will be to share experience, knowledge and best practice. This group could include consultants and will help the Heads of Valleys be at the vanguard of good street design. Another potential role of the Street Design Forum could be as a peer review panel to discuss schemes, ideas and new management practices and offer observations at an early stage.

In addition, these street design teams need to work closely with utilities companies and local access groups in particular to develop consensus and solutions that work.

It is important that this group has a sense of direction and leadership. We recommend that the Heads of Valleys Programme Board or the Welsh Assembly Government appoint a street design tsar, who should be responsible for making the Heads of Valleys Authorities the model for best practice in the UK and Europe. Elsewhere in this document we have advocated the importance of specifying good quality materials for their aesthetic qualities and their longevity. This alone is a good reason why new ways of managing the public realm are required. For the longevity of these materials to be maximised, the five Local Authorities need to be certain that they can maintain the quality of these surface treatments over long periods of time.

Another important way of working will be to engage the Design Commission for Wales more in matters relating to the public realm. Incorporating peer review into the design process is essential and Design Commission for Wales should continue to assist with this process through the design review process.

To achieve economic and environmental sustainability, the streets we are designing and implementing now need to be built to last and maintained accordingly. We recommend that in order to secure funding from WAG or Heads of Valleys Programme, all future schemes need to demonstrate how they comply with the recommendations in this document and others that precede it.

# 09 IMPLEMENTING THE GUIDELINES

## Establishing Local Supply Chains

Aside from creating a corporate policy framework for street management, one of the biggest opportunities that the Local Authorities in the Heads of Valleys has relates to how materials and items that go into the street are procured. New public realm represents a huge investment and this is an opportunity to achieve significant added value.

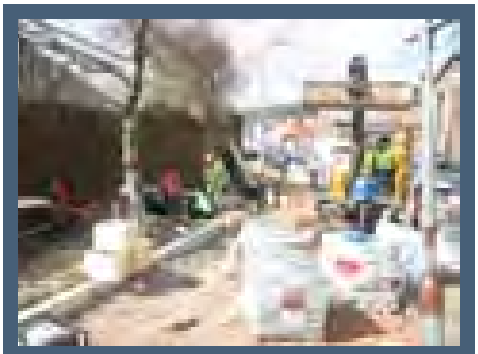
We recommend that the five Local Authorities, Heads of Valleys Board and WAG consider establishing a joint purchasing consortia for common materials. The purpose of this will be to offer suppliers economies of scale and give purchasers the leverage to negotiate competitive rates. Our initial investigation into this concept has met with favourable responses from suppliers themselves. A multi-national supplier and a small local company would both welcome the opportunity and could consider holding stockpiles of materials for such a large customer or reducing standard ordering times. Competitive pricing and delivery speed will be crucial factors in determining whether this could enhance the way that streets are designed and managed.

## Capital Works Procurement

The value of capital works associated with the public realm can run in to hundreds of thousands of pounds and often to several millions. It is essential therefore that best practice is applied when procuring these works. For at least the last two decades, Wales appears to have been 'joined at the hip' with design and build contracts for most major architectural and civil engineering projects, in the belief that this form of contract offers 'best value'. In purely monetary terms this may well be the case, however, there are also downsides to this method of procurement, namely:

- Too much power and responsibility is vested in the Main Contractor, at the expense of other members of the design team. This often results in variations to the scheme being made which compromise the original design concept and subsequent appearance of the works.
- There is now too much emphasis on completing the scheme on programme and within budget with too little emphasis on achieving a quality urban environment.
- The overall responsibility of the professional design team is diluted
- Too frequently there is no effective mechanism for monitoring quality control of the works as they proceed.
- Over-reliance is spent on performance based specifications which are rarely a guarantee of real quality

# 09 IMPLEMENTING THE GUIDELINES



Contractors on site in Ferndale

## Main Contractors

Selection of a suitable Main Contractor to undertake the public realm works is critical to its long term success. In the recent past, schemes have suffered because the Main Contractor does not always have the necessary skills and becomes over reliant on sub-contractors and temporary labour. Indeed there are recorded instances where specialist teams have been imported to Wales from Portugal specifically to lay fantail patterns of stone setts.

## Programming of the Works

There is often a tendency for capital works projects such as public realm schemes to be commissioned during the period either side of Christmas to achieve capital spend by the end of the financial year. The result is that everything is done in a rush with insufficient time particularly at the critical design stage.

One of the most controversial, and difficult to reconcile aspects of many public realm schemes, is the need for temporary road closures to facilitate the works. Besides the obvious inconvenience to the public and those using the town centre, temporary road closures can have a disastrous short term effect on the trading of high street shops, particularly when the work is carried out during peak periods of trading. Others that suffer include companies delivering goods to shops as well as local bus companies. For these reasons there has been an understandable but unfortunate temptation to re-open roads to traffic before completed works to the highway have had time to cure.

**Therefore the Heads of Valleys Local Authorities should:**

- Consider alternatives to design and build contracts which place more responsibility on the professional design team and also facilitate quality control by the design team.
- Issue design briefs for schemes earlier in the relevant financial year to accommodate sufficient design and research time.
- Insist that Main Contractors to include examples of past work undertaken by the specific workforce who will be on site. Guarantees from the main Contractor that the workforce will not change without prior agreement with the Employer.
- Provide training opportunities to improve the skills of their respective direct works teams.
- Programme public realm schemes in town centres to avoid peak commercial periods like Christmas.
- Enforce street closures in the highway for the necessary period to allow the works to settle and to cure, before they are trafficked.

# 09 IMPLEMENTING THE GUIDELINES

## Giving these Guidelines Weight

The information in this document is set of local guidelines, bespoke to the Heads of Valleys sub-region. This document references other similar guidelines, best practice, case studies and policy guidance. For the recommendations to be implemented, Local Authorities need to consider how the information in this document is going to be given the appropriate weight.

Adopting this document as Supplementary Planning Guidance (SPG) is one method that should be considered. This will be relevant if Local Authorities choose to establish s.106 contributions as a means of funding street management. However, it needs to be highlighted that planning consent is not required for public realm schemes as they fall under permitted development. The usefulness of preparing a SPG, or adopting this as SPG is therefore limited.

However, Councils are able to formally adopt this document which we recommend they do. *Traffic Management & Streetscape* is relevant for England and Wales. The Welsh Assembly Government have endorsed it, but as it is a Local Transport Note, if it is going to carry any weight Local Highway Authorities need to formally adopt it as local guidance. We strongly recommend that this is done.

There is potential for the guidance elements of this document to be included as part of the Local Transport Plans as part of the locally relevant targets.

However, a longer term opportunity will be to embed the principles of this document into the emerging Regional Transport Plan.

# 10 CONCLUSIONS & RECOMMENDATIONS

# 10 CONCLUSIONS & RECOMMENDATIONS

**This document has established general principles of good street design in relation to the Heads of Valleys town centres.**

Clearly, each of these chapters is worthy of a publication of this size in its own right and only so much can be written here if this document is going to be useful as a reference to the five Heads of Valleys Local Authorities. This is especially the case, since so much has been written about what constitutes good public realm since 2000.

This Good Practice Guide will hopefully result in towns in the Heads of Valleys region that have a similar 'feel' but exhibit very different local characteristics and nuances. For this reason, there is a reasonable amount of latitude within the guides that we have established, and it will be for the Local Authorities and their funding partners to determine how these recommendations should be delivered.

In order to crystalise the findings of this study the recommendations of can be summarised in terms of two groups. We have prepared fifteen technical recommendations which encapsulate the General Principles present at the opening of each chapter (without necessarily repeating them) and in addition to this, we have outlined fifteen organisational recommendations.

## Technical Recommendations

- Each Authority should adopt LTN01/08 Traffic Management and Streetscape
- Take an approach to highway design in town centres which reduces certainty for vehicles and places the priority on pedestrians
- Use the flexibility inherent in TSRGD 2002 to protect the unique character of towns
- Closely monitor ongoing research and best practice concerning street design and inclusive mobility.
- Each town needs to have a coordinated palette of materials, some of this needs to be authentic to the Heads of Valleys
- Materials with low embodied energy should be selected wherever possible.
- Public realm design should incorporate and celebrate the uniqueness of each of the towns in the Heads of Valleys

- A thorough audit of street furniture and other street items is required in every town, the purpose of this will be to identify superfluous items and recognise items that could be building mounted and/or multi-functional
- Street furniture in the Heads of Valleys should be robust, multi-functional, simple, timeless and should wherever possible be painted in dark or muted colours or be constructed of stone or timber.
- The use of pedestrian guardrails should be avoided wherever possible
- The approach to CCTV which has been deployed in Blaenavon should be adopted elsewhere
- Trees should be encouraged as an important part of the streetscene of Heads of Valleys towns
- Each town should have a public art strategy, which ideally should be linked to a regeneration strategy and, if required, a public realm strategy
- Material stockpiling is essential to sustain initial improvements to the public realm
- Authorities need to find the best approaches to monitoring and maintenance and share these with each other

## Organisational Recommendations

- Invest in training at all levels from key decision makers to site operatives
- Invest in suppliers to enable Local Authorities and local quarries to share in the benefits of public realm investment
- Significant investment is required in increasing the effectiveness of parking enforcement. Excessive bollards and cracked surfaces are often the result of illegal parking and are one of the most common detractors in our towns
- With funding for revenue being difficult to obtain, methods need to be comprehensively reviewed
- Develop performance criteria to help chart the progress of street maintenance with regard to the wider visual impact of repairs on towns

# 10 CONCLUSIONS & RECOMMENDATIONS

- Early dialogue with key decision makers in utilities companies is critical to minimise disruption and create opportunities for investment in infrastructure
- Information needs to be shared between authorities on maintenance methods for street lighting and other furniture
- A formalised collaborative approach is required to enable professionals to work together more effectively
- A coherent corporate stance on public realm design and maintenance is required
- All Officers and Councillors who make decisions about the public realm should have a basic understanding of what constitutes good urban design. This is particularly important for transportation professionals and LTN01/08 helps to address this
- Key street decision makers should attend accredited training courses such as PRIAN and this qualification should be recognised by key agencies in Wales such as DCfW, WAG and CADW
- Create a Heads of Valleys Street Design Forum as a means of sharing information, experience and best practice
- Visit streets that work well and discuss with the professionals responsible for them. (CABE have identified 10 benchmark streets (*This way to better streets: 10 case studies on improving street design, CABE, 2007*)
- Create a joint purchasing consortium to develop local economies of scale and facilitate group buying power from suppliers. Simultaneously, invest in Welsh businesses who could service and benefit from this upsurge in demand
- Reconsider contractual arrangements and investigate procurement methods beyond Design and Build which can help realise better quality public realm

At the outset of this document five objectives for the future of public realm were established. The first fifteen recommendations indicate the ways that these can be realised. Whilst the second fifteen recommendations establishes the processes and pre-requisites for change which need to be in place for better quality public realm to emerge.

These findings are consistent with the principles for change from "This Way to Better Streets" (CABE, 2007)

# 10 CONCLUSIONS & RECOMMENDATIONS

## 1. Vision

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

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.

## 2. Commitment

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

Devizes Market Square is the result of 10 years dedicated work and careful design and it has succeeded in retaining and enhancing the vitality of this historic Wiltshire town.

## 3. Integration

**Accommodate people and the various ways of travelling in streets. Connect street networks to help people to choose to travel sustainably.**

In Newcastle, Blackett Street and Quayside have had a vital role in the transport network for the city centre, and demonstrates innovative solutions for the relationship between traffic and the public realm.

## 4. Adaptation

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

Originally tackled as part of a flood prevention scheme, Bideford Quay 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 well-conceived projects where organisational, political and technical issues are resolved into a coherent design solution.**

Dublin's O'Connell Street, brings together much of the history and aspirations of Ireland in one coherent boulevard. The scale and elegant proportions of with its combination of buildings, sculpture, lighting and trees, positions it in the league of great European boulevards.

# APPENDIX: 1

# A QUICK GUIDE

**This section is to be used in conjunction with the guide. It aims to provide an easy way of using the Good Practice Guide by giving an overview of the key considerations, while at the same time providing reference to the related sections in the document.**

## OBJECTIVES >>Page 14

- Do the interventions fulfil the objectives for achieving good quality streets? If there are adverse effects on some objectives, has there been an appraisal of how this can be mitigated? Are there additional project specific objectives?

## PEDESTRIAN AND VEHICULAR MOVEMENT >>Page 8-28

- Has the balance between pedestrian and vehicular movement been addressed? do interventions follow an "integrative approach"? Have key principles been acknowledged that underlie this approach (sense of place, perceived risk, low design speeds etc.)
- Does the public realm fulfil town centre as well as movement functions adequately?

## ACCESSIBILITY >> Page 28, Page 81-82, Appendix 3

- Does the intervention consider maximum accessibility for all members of society? Has there been a process of engagement with the local access/ mobility group? If not, what is the earliest they can be included?

## SURFACE MATERIALS >> Page 30-34

- Have surface materials been chosen with regards to the local provenance, user-friendliness, future repairs, embodied energy, an appraisal of long term performance and technical requirements?

## STREET FURNITURE >> Page 36-39

- Does the choice of street furniture follow a coherent and subtle design that reflects the unique character and the geography of the town and will it be appropriate in the long term?
- Have ways been explored to minimise the number elements within the public realm to reduce maintenance liabilities, maximise usability, flexibility and pedestrian friendliness?

## TREES AND PLANTING >> Page 41-45

- Does the scheme allow for a good variety of trees and planting that enhances the quality of different spaces within the public realm?
- Have technical, maintenance and management requirements been considered in order to prevent future problems?

## PUBLIC ART >> Page 47-48

- Does the town benefit from a variety of public art that increases attractiveness and interest with adequate references to the specific history and geography to the place?
- Does the place fulfil its potential in terms of the variety of artefacts, permanent and temporary elements as well as working on appropriate scales?

## MAINTENANCE AND MANAGEMENT >> Page 50-53, Appendix 3

- Does the choice of materials and elements take into account future requirements for maintenance and management?
- Has there been a careful appraisal of all potential elements?
- Do the methods of construction and installation take into account the full range of future uses and implied technical requirements?
- Have measures been undertaken to ensure future repairs on a like-for-like basis?
- Has there been an engagement process with the utilities companies?
- Have all measures of funding been explored for costs of construction as well as maintenance?
- Have all relevant professional groups within the local authority that are involved with design, construction and management been integrated into the design process? If so, how? If not, why not?
- Is there a consensus on the project team about the long term aesthetic agenda of the scheme?
- Has there been consideration of group purchasing arrangements?
- Have the principles, logic or concept behind the intervention been discussed or shared with any other peer review group of other officers other than in the Local Authority or the Design Commission for Wales?
- What is the current best practice with regard to the measure being taken? How have those lessons been transferred?

## IMPLEMENTING THE GUIDELINES >> Page 55-62

- Does the contractor have sufficient workforce and skills in place to implement the scheme according to the designs?
- Have measures been explored to source materials and elements as locally as possible?
- Is there a monitoring mechanism in place from design to construction?

# ACKNOWLEDGEMENT

We would like to thank English Heritage for their consent to use the following case studies which they had compiled as part of their *Streets for All* series of publications.

- City of Nottingham
- Suffolk County Council
- Kensington High Street
- Tunbridge Wells, Kent
- Wells, Somerset
- Shrewsbury Town Centre
- Oswestry Town Centre

# APPENDIX: 2

## CASE STUDY
### CITY OF NOTTINGHAM

**Several local authorities now have comprehensive programmes for the systematic removal of redundant street furniture and clutter. A high profile programme is being undertaken at Nottingham.**

Street clutter often accumulates because there is no single responsibility for the removal of redundant street furniture. Capital budgets exist to carry out new works, but maintenance budgets seldom extend beyond statutory requirements to allow for simple tidying up. Where authorities have embarked on such programmes they have been surprised at the amount of street furniture that has no current purpose.

All signs and equipment are originally erected for a specific purpose, but over time signs are duplicated, adjustments to traffic schemes make some unnecessary, and views on the need for some signs are also changing.

In addition, the legislation governing the need for signs may change. A notable recent change took away the need to provide the small yellow sign indicating no parking “at any time”. The accompanying double yellow lines in the road are now deemed sufficient to enforce the restriction. At a stroke, thousands of these signs and their supporting posts can be removed from every town and village across the country.

Nottingham City Council’s Clutterbuster seeks out and removes these signs and other redundant street furniture, such as small lengths of unnecessary guardrail.

The Clutterbuster with his van is active throughout the City and has removed over 2000 signs since 2003.

Clear guidance means he is confident in what has to be done, and he is provided with a schedule prepared in consultation with relevant departments of the Council. This is important because historic street furniture has often survived the test of time by default rather than by design. Now it needs to be identified and, where possible, kept in use.

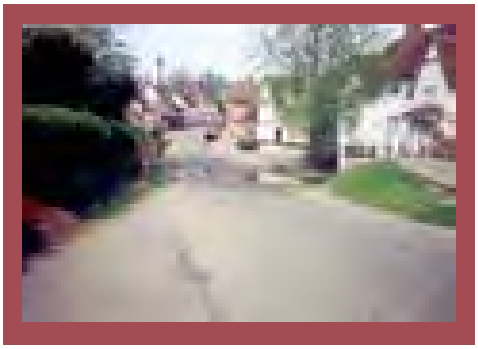
### Conclusion

A clutter removal programme can have fast and dramatic effects, and it is readily appreciated by the general public. It is a simple way to enhance public spaces and it can be justified financially by the consequent reduction in maintenance costs.

Photograph with permission of Nottingham City Council

# CASE STUDY
## SUFFOLK COUNTY COUNCIL

**A series of manuals giving guidance for highway works in sensitive areas has been published by the Suffolk Local Authorities. They are a product of a long standing collaboration between the County and seven district councils, and are one of a raft of procedures aimed to achieve more sensitive work on Suffolk's roads.**



For the past fifteen years, officers of the transport and environment divisions of Suffolk County Council have been working with the conservation officers of the district councils to forge better interdisciplinary understanding and working practices. This is in marked contrast with experience in many other counties where good conservation practice in respect of historic buildings can be undermined by inappropriate work in public spaces. Similarly some highway authorities see a failure of planning colleagues to understand basic engineering and safety requirements.

The procedures developed in Suffolk are not unique, but they do go further and are more structured than other counties. Since 1993, a Conservation Forum is held twice a year and is attended by the conservation officers of the County and district councils and representatives of each of the transport divisions at the County. Concerns are aired and good practice examples are presented, often with an accompanying site visit. The networking opportunities of Forum often resolve problems before they become an issue.

As a result of problems identified at Forum, conservation officers and engineers went on to write a series of good practice manuals to assist in the carrying out of work in a sensitive manner. These manuals are approved by Councillors as policy documents and include critical reviews of some of the work already carried out in the County.
When undertaking work, the engineer also refers to an electronic checking system EnCheck, to see if the scheme affects any sensitive areas. EnCheck will refer the designer to the relevant expert or external body for advice.

Wherever possible highway schemes are designed to be multifunctional: a well designed speed reduction scheme may also enhance a village conservation area and assist in attracting visitors to stop and contribute to the local economy – often thereby tapping into additional urban conservation, economic development and tourism funding.

Standard solutions are adapted to create schemes which respond to the special character of individual locations. Examples of such work in Suffolk include the planting of a hedge in an area of outstanding natural beauty as a speed reduction feature to visually narrow the width of the carriageway. In another place a need for a speed reminder feature was resolved by painting white an existing traditional railing around a culvert, thereby creating a visual narrowing. Much of this work is small scale but the incremental effect of the continuous pressure to make roads safer, unless carefully thought out, can have a huge impact on the environment.

### Conclusion

Close co-operation between conservation and design officers and the highway authority has led to significant improvements in the environmental and visual quality of highway works. In particular the unique quality of Suffolk is being protected from being overwhelmed by the excesses of standard highway solutions.

Photographs with permission of English Heritage

# APPENDIX: 2

## CASE STUDY
### KENSINGTON HIGH STREET

**High Street Kensington was comprehensively refurbished using high quality paving and street furniture. It was recognised that the quality should be supported by a reduction in clutter, particularly superfluous guardrails. An assessment process was devised to determine where guardrails could be removed or reduced in length.**

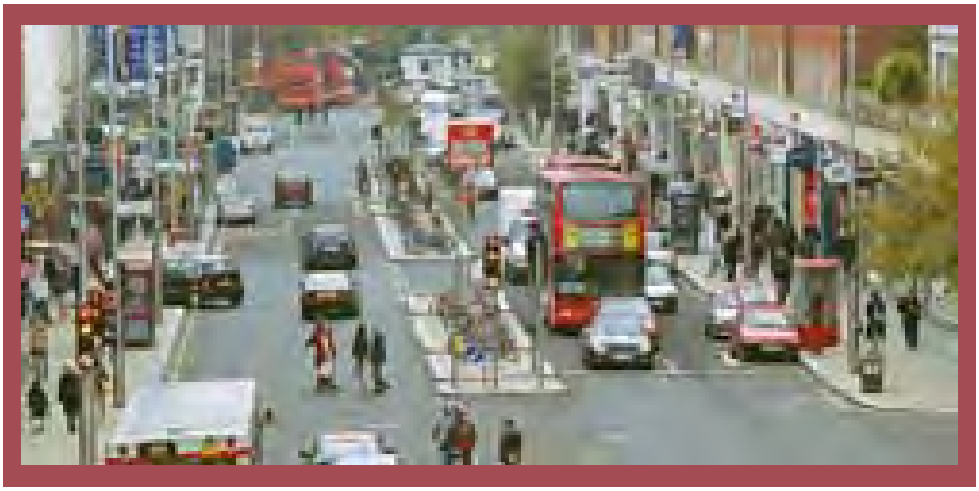
Conventional wisdom on the effect of guard rails is being reconsidered. A parliamentary committee has questioned the need for the extent of guard rails, particularly those on pedestrian refuges that are likened to sheep pens.

At the intersection of Kensington Church Street and Kensington High Street, pedestrians formerly crossed the road using a three stage crossing. This required pedestrians to cross each lane and a left turn filter lane as a separate and distinct stage, each stage defined by guardrails and with its own press buttons and stop signal for pedestrians. There were four rows of guardrail in all.

This arrangement has been replaced with a single crossing over both lanes of the carriageway and the left turning traffic lane, with the stages no longer separated by refuges. More significantly, a risk assessment concluded that the guardrails could be removed on all but one side of the junction.

This required a safety audit and a design statement to justify the decisions that were taken. These were fully documented and approved by elected members of the Council. The scheme is constantly monitored with a view to erecting guard rails should the need arise.

Where the guard rails have been retained, it is because the risk of removal was considered to be too great. This is at a place in the road where there are no pedestrian refuges and traffic crosses from four directions.



### Conclusion

The effect of high quality materials can be undermined by the clutter of street furniture, such as bollards and guardrails. However, their removal must be supported by sound decisions that have full regard for safety as well as engineering and design. Risk assessment is an important technique for reducing precautions to a necessary minimum. At High Street Kensington, the redesigned junction has improved the streetscape and the setting of historic buildings. It has also added to the comfort of pedestrians crossing the road without compromising safety, which is continuously monitored.

# CASE STUDY
## TUNBRIDGE WELLS, KENT

**In Tunbridge Wells, urban design and conservation are seen as key elements in the creation and maintenance of the public realm. The Tunbridge Wells Streetscape Manual and its rural counterpart reflect a commitment to involving all those charged with designing and managing work in the public realm.**

The Tunbridge Wells Streetscape Manual stemmed from a Town Centre Management project and has been in use since 1996.The project included a sign culling exercise, leading to a comprehensive signing strategy, and also resulted in fewer guard rails on pavement edges.

The manual has formed the basis for negotiations with all stakeholders in the public realm, including the highways authority who use it as a good practice guide. It has been used in proactive negotiations with utilities companies for routing, cable laying and siting inspection boxes.

A working group was established in 2000, comprising the Planning Department, County Highways, Environmental Health, and Tourism and Leisure, to agree key principles and develop co-ordinated actions. Over a number of years a high level of co-operation has been established, delivering coherent projects within a formal design framework. These include the creation of a market and public activity space in front of the Town Hall, funded through the transportation strategy.

The manual covers both the wider context of urban design and the morphology of the townscape, and details such as the details of paving and street furniture. Much of this is specific to the town.

The Pantiles is an early Victorian neighbourhood adjacent to the central core. Its restoration illustrates the manual in action. The authority prioritised the conservation of the existing brick paviours. The distinctive ragstone ‘spall’ chippings were supplemented with material from a new quarry. The manual emphasises the distinctiveness of each neighbourhood, keeping the design approach simple and restrained.

A rural counterpart was developed in 2003. Similarly, it establishes the character of the rural public realm and develops an approach which incorporates principles of sustainability, access for all users and safety. It highlights the need to respect soft, informal boundaries and edges to the carriageway. Road markings are discouraged as far as possible. The reduced engineering standards of rural roads are recognised and designers are directed to these for models.

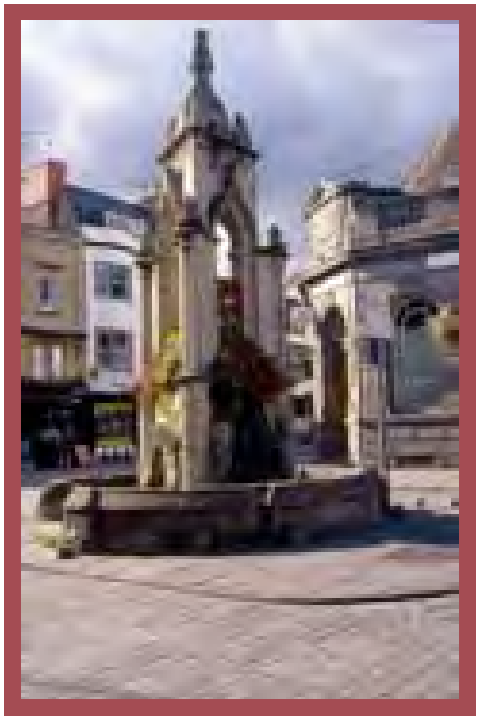
### Conclusion

This example shows the value of clear written guidance, which is then used to produce tangible results of high quality. Streets for All aims to encourage all authorities to prepare local manuals so that best practice can become everyday practice.

# APPENDIX: 2

## CASE STUDY
WELLS, SOMERSET

**Wells, one of England's smallest cities, has been the focus of a programme of coordinated street design and enhancement schemes since European Architectural Heritage Year in 1975. The long-term view has been sustained by Somerset County Council through consistent in-house action.**



Photographs with permission of English Heritage

Enhancement schemes in Wells have combined urban design and conservation in a continuous process, carried out incrementally as opportunities and resources become available. Throughout, an overall vision was maintained so that individual schemes become components of a whole. The gradual process meant that lessons could be learnt from earlier projects. This set of projects in Wells reflects a commitment to quality in design and management in the long term.

### Achieving environmental improvements

Wells Market Place was used primarily as a car park and the Conduit Head, once a significant landmark, was eroded and attracting clutter. To improve the quality of these key public areas, it was proposed that traffic was removed and the area resurfaced. Following discussion with local traders, an element of parking was included. It is now generally accepted that the scheme has improved the setting of local shops and retail environment in the city centre. The success in reducing the impact of the car has led to demands that the Market Place is closed to traffic in the summer, for the annual fair and the weekly market.

The public support for the Market Place scheme helped to promote projects in Sadler Street and High Street, which were funded by the Department for Transport as a traffic calming project. A Steering Group included local businesses, councillors and the town centre manager. Cyclists, the access group and the local community were also consulted through exhibitions and a community planning event.

The local Pennant sandstone was unavailable, so York stone was used as flagstones, kerbs and large setts at crossovers. Kerbs are set low to the carriageway. The characteristic gullies along the edges of the carriageways, almost continuously running with water (from the Wells) have been realigned, not for the first time in the history of the City, along the new carriageway. The frames for the gratings which bridge the gullies in various places were formed locally in Glastonbury.

A highway engineer joined the Historic Environment Service and became closely involved with the design philosophy of the scheme. A protocol has been approved whereby any works within the highway in a conservation area are referred to the Historic Environment Service. The overall concept was to produce a restrained, uncluttered environment, with local features.

# CASE STUDY
## WELLS, SOMERSET

The area is a 20mph zone. Footways have been widened and parking only permitted where indicated (by signs fixed to walls). Cars parked outside the indicated areas cause an obstruction, so the scheme becomes self policing. There are no double yellow lines and hardly any signs or other markings.

## Timeline of Wells enhancement schemes:

### 1975-84 Vicars Close

Refurbishment of houses was complemented with work to repair the historic street surface of cobbles and setts

### 1987-89 Cathedral Green

The improvement of footpaths provided better accessibility and a paved area in front of the Cathedral.

### 1990 Union Street

Introduction of a shared surface enhanced the link between the City's major car parks and the High Street.

### 1992-93 Market Place

A major scheme to resurface the Market Place, using traditional paving, provided an improved setting for fairs and markets. It also resulted in a significant reduction in car parking

### 1997 Relief Road

This significantly reduced the volume of traffic through the City Centre.

### 2001 Sadler Street

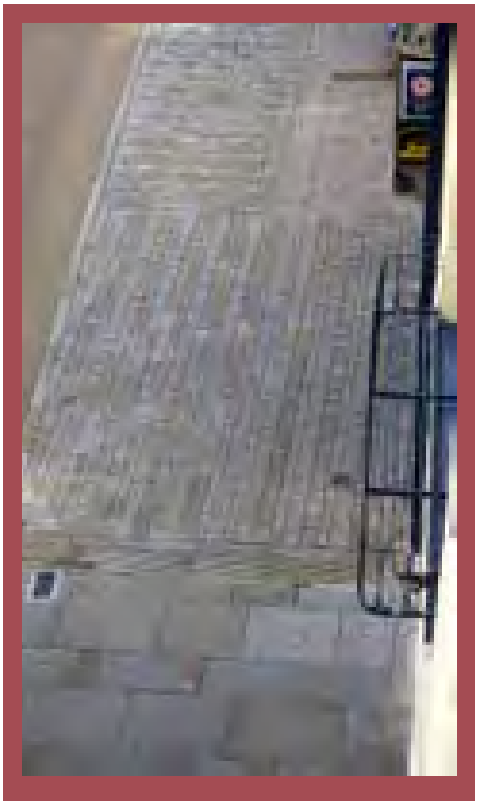
As a result of the relief road works it became possible to widen the footways in Sadler Street and reduce the need for signs and parking.

### 2002 High Street

The High Street scheme continues from Sadler Street using the same materials. It links earlier schemes in Union Street and the Market Place

### Broad Street

The possible future treatment of Broad Street would complete the linear improvements. The project aims to enhance the "entrance to the city" by recreating a tree-lined avenue



### Conclusion

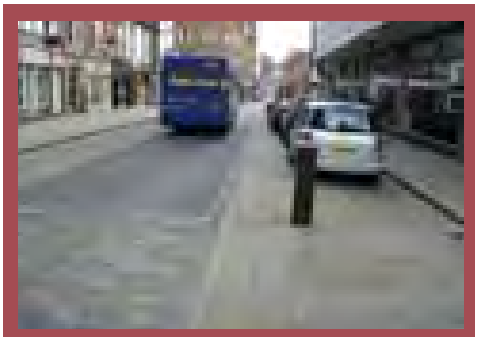
These projects have largely been undertaken by the Historic Environment Service of Somerset County Council, with most of the funding and implementation through the County Highways Department with whom a continuing and creative relationship has been forged. Few counties retain this level of direct design of conservation projects.

The success of this programme shows the value of long-term commitment. It is rarely easy to raise funds for capital programmes. However, an important factor in Wells' success has been to invest what was available in quality.

# APPENDIX: 2

## CASE STUDY
### SHREWSBURY HIGH STREET

**A series of twenty "courtesy crossings" along the High Street encourage drivers to give way to pedestrians. No formal crossings are used so the surfaces, road markings and street furniture associated with them are not needed.**



Well divided street that deploys the use of different materials and unit sizes

Shrewsbury was one of four historic towns participating in the Historic Core Zone Pilot Project promoted by the English Historic Towns Forum with support from the Department for Transport, English Heritage and the Civic Trust. This experimental scheme was promoted by street clutter in a historic town centre and improve the environment for pedestrians.

Shrewsbury High Street is used predominantly by buses during the day, though cars and service vehicles are not excluded. Physical alterations to the carriageway, rather than traffic regulation orders, have been used to reduce speed.

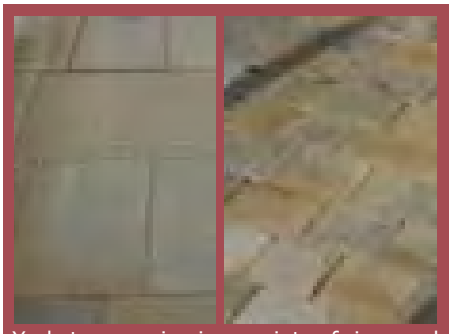
The carriageway was reduced to a minimum width of 3.5 metres and footways were widened accordingly. Clearly defined crossing places were constructed using smooth-faced York stone setts. The distinctive design and close spacing of the informal crossings (at an average of 30 metres) encourages drivers to maintain low speeds and give way to pedestrians. Speeds are seldom above 15 mph, giving ample time for eye contact between drivers and pedestrians.

**'The scheme has resulted in a 34% reduction in traffic volume, a 22% reduction in traffic speed and a high level of public approval'**

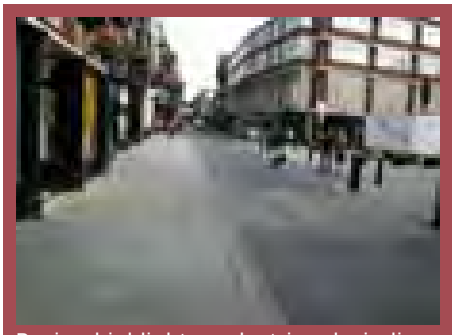
The whole street is a restricted parking zone, so no yellow lines are necessary. Parking and loading bays are indicated by black basalt setts, a material found elsewhere in the town. The Department for Transport sanctioned a reduced size of loading restriction signs which are fixed to robust timber bollards at the edge of the pavement. The posts also help define the crossing points. As there are no controlled crossings, such as zebra or pelican crossings, there is no need for associated road markings or posts such as Belisha beacons or pedestrian and traffic signals.

### Conclusion

As an alternative to traffic regulation orders, physical methods can be effective in reducing the clutter of signs, lines and signals as well as promoting safety. However, care is needed to combine engineering and design solutions that relate to the precise conditions of the location.



Yorkstone paving in a variety of sizes and textures allows for subtle differences within the same colour scheme



Paving highlights pedestrian desirelines as well as indicating a threshold for vehicles

# CASE STUDY
## OSWESTRY TOWN CENTRE

**Oswestry's townscape has distinctive public spaces and a traditional medieval street pattern with buildings pre-dating the Second World War.**

Located in the heart of the town centre, Cross Street and Willow Street were at the focus of Shropshire County Council's Town Centre Enhancement project and provide an example of implementing parking restrictions without yellow lines.

The European Development Fund provided 50% of the total £1.3 million project cost. The main objectives were to improve pedestrian movement and regenerate major streets within the town, and to remove traffic from the main shopping street between 10am and 4pm.

The scheme provides;

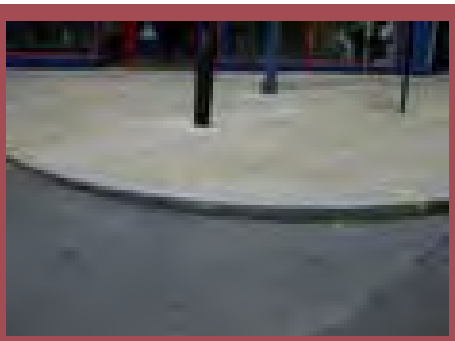
- More space for pedestrians and an improved feeling of personal safety
- Ramped crossing points to assist with pedestrian movement
- Improved pedestrian linking of previously pedestrianised areas centred on Bailey Street with Church Street and the passageways connecting to the central car park
- Revival of The Cross as a town centre focus
- Lower traffic speeds throughout
- Enhancement of the setting for certain important buildings
- A street scene without yellow lines.

Enforcement is key to ensuring parking restrictions work, especially where the use of yellow lines is reduced. The success of the Oswestry scheme was helped by the implementation of a new enforcement regime produced as a result of the decriminalisation of parking enforcement in Shropshire. This ensured a strong stance on parking within Oswestry that was actively enforced. The scheme has since won a Highly Commended Certificate from the Institution of Highways & Transportation as well as awards from Oswestry Civic Society and Oswestry Town Council and marks the success of the Oswestry Town Centre Enforcement.

Integration of drainage channel into the design; the result is not as subtle as it could be due to the channel running central

The quality of kerbs is as important as the way they are used - the need for dropped kerbs should be considered in context

Different methods of lighting ensure that a town is set in scene after dark



Widened pavements along radius provides for better pedestrian movement; although dispersed columns counteract this

# APPENDIX: 2

# ADDITIONAL CASE STUDIES

The following case studies have been prepared based upon our own site visits and interviews with various key officers

- New Road, Brighton
- Blaenavon Town Centre
- Bohmte Towns Centre, Germany
- Blaenavon
- Devon County Council

# CASE STUDY
## NEW ROAD, BRIGHTON

**New Road is a small street in the centre of Brighton with shops, central services and public venues lining the public realm. The layout has recently undergone significant changes.**

The street has transformed from a standard subdivision with pavements, kerbs and carriageway to a shared surface that integrates all modes of transport and aims to reduce the visual subdivision between different areas within the street. Pedestrian movement has priority over other forms of movement.

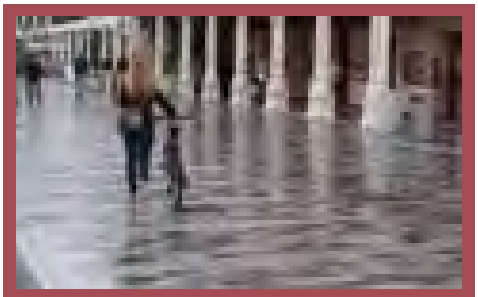
New Road, Brighton: Shared surface with pedestrian priority eases movements and enhances pedestrian environment

The street has been paved in granite paving with medium unit sizes and a colour pattern that is laid at random. Outdoor uses of adjacent cafés form a zone with tables and chairs in front of the buildings and enliven the streetscape. Street furniture such as bins, benches and cycle racks are positioned towards the sides of the street. The street bears a natural subdivision due to its different functions; however, the boundaries between different zones are vague and kept deliberately subtle. The drainage channel with hazard paving on one side and the columns of the theatre form the delineators between the middle that is being used by vehicles and the sides that are primarily for pedestrian purposes and partially blocked off by street furniture.

Cycle racks provide organised parking; its situation within the public realm is crucial

The aesthetic outcome of the changes is very good and the street is very pedestrian friendly for large parts of the public. The changes result in an unrestrained movement of pedestrians and cyclists who enjoy the space and take ownership of it. Vehicles adapt well to the situation where they are guests in a pedestrian friendly environment. Car speeds are generally low. The integration between vehicular and pedestrian movements worked well with very few conflicts, making the scheme a success.

However, the new layout has implications for the usability for the partially sighted and blind. A Guide Dogs for the Blind Association survey assessed the usability of New Road for visually impaired people and examined how the old and the new schemes compared, for both guide dog owners and long cane users. For both, guide dogs and long cane users, the kerb forms the clearest element of orientation within the public realm and with the omission of the kerb, the distinction between vehicle used and pedestrian only spaces has been removed. At the same time the removal boundaries omits ‘safe spaces’ that are guaranteed to have no vehicles and significantly add to the comfort of using public open spaces for the blind and partially sighted. Despite the channel forming a delineator and marking the equivalent of the classic carriageway, the intention behind the delineator was not recognised by many participants and the delineator hence forfeited its function.



Shared surfaces allow for a multitude of functions while a lack of visual boundaries offers little orientation for the visually impaired

Before the introduction of a shared surface, the participants perceived the biggest problem to be caused by cyclists as well as tables and chairs on the pavement that formed obstacles. Due to its clear subdivision, most participants found that navigating their way through the street was easy.

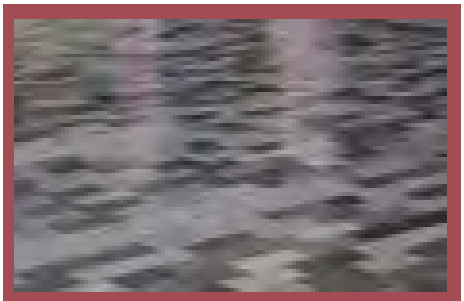
# APPENDIX: 2

## CASE STUDY
### NEW ROAD, BRIGHTON

After the public realm enhancements, all participants had considerable problems in navigating the street. Little contrast in surface colours, a more subtle delineation between different zones and the general lack of boundaries was felt to be the main causes for this. The tactile paving was so subtle in terms of colour and relief that it was not recognised as a boundary and lost its function altogether while at the same time the colour contrast between tables, chairs and surface colours was perceived to be too minimal. This turned tables and chairs into obstacles, particularly as they were placed along the strip that was intended to be the 'safe space'. There was also notable confusion about the direction vehicles would approach from.

While the traditional layout was hazardous in places, the participants were able to negotiate hazards because they were able to detect them. Shared surfaces bear the danger of reducing and minimising elements that aid the detection of hazards and hence their negotiation is difficult. Despite the fact that drivers on New Road noticed the participants, recognised their special needs and changed their driving accordingly, most participants still felt unsafe among these vehicles.

Although shared surfaces can implicate difficulties for people with certain disabilities, there are measures that allow for the benefits of the integration of traffic modes as well as an adequate usability for everyone. For shared surface schemes to be successful and safe, it is advisable that there are 'safe spaces' within the shared surface that offer spots without vehicle uses. These must be detectable and be delineated in a clear manner. Elements such as street furniture should not block areas of the 'safe space' and should contrast the surrounding surfaces in its colour.

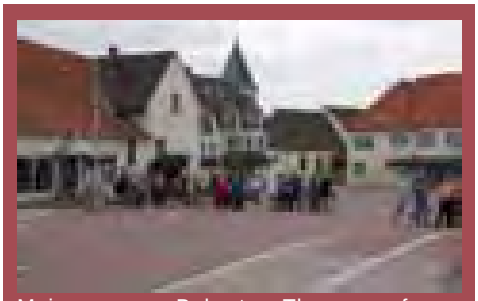


The paving is attractive and low maintenance but random colour patterns can result in confusion with visually impaired people

Space delineators need to be visually and physically distinctive with the intention to warn or guide being obvious and detectable

# CASE STUDY
## BOHMTE TOWN CENTRE, GERMANY

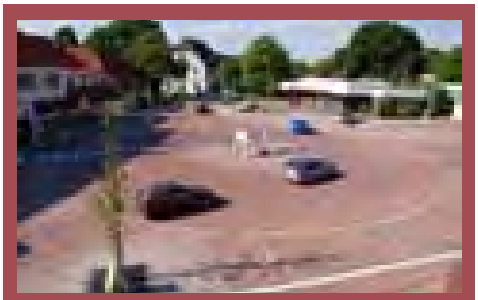
**The North German town of Bohmte in Lower Saxony is one of the seven towns that take part in the European "Shared Space" project that aims to integrate all modes of movement into one system that is beneficial for the quality and use of public open spaces while at the same time catering for transport needs.**



Main square, Bohmte: The use of one paving material underlines pedestrian friendly environment

Shared surfaces are characterised by an integration of all functions and modes of movement into one area. Only few very basic traffic rules are in place, which do not require signage. As priorities and the flow of movement are negotiated between pedestrians, drivers and cyclists, traffic speeds go down naturally due to the drivers' perception of the space and potential hazards.

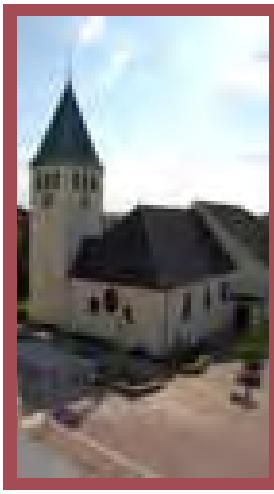
Since May 2008, the town centre of Bohmte has been completely free of regulatory elements such as signage, traffic lights and guard rails and all users share the complete public realm with equal priority. Since the inauguration of the scheme, the pedestrian environment has been enhanced significantly and a tendency towards fewer accidents has become apparent already.



Paving pattern guides the vehicles over the space without being prescriptive

In order to transform most of the town centre into a successful shared space, the residents of Bohmte were integrated throughout the process. A local steering group was formed which included council members as well as local business people. The steering group coordinated the planning process while a project group within the local council was formed to keep up with the financial side of the project. An initial resident meeting outlined the proposal to the members of the public and gathered a first feedback. Further residents workshops were held by the steering group and a team of experts with the outcome being fed into the development of a framework plan that was then discussed by residents again.

The main road that runs through Bohmte is classified as an A-road and is typically to be maintained by a super ordinate authority. Due to the changes in the conventional street layout, the town of Bohmte had to accept responsibility for the future organisation, maintenance and duties of insurance. Also, the town had to agree beforehand to reinstate the road to its original status in case the shared surface turned out to be inadequate. With half of the project being funded by the European Union, the other half was paid for by the town of Bohmte.



Consistent paving pattern provides demure and adequate surrounding for public buildings

During the process, the involved people of Bohmte showed a considerable amount of determination and managed to overcome financial as well as managerial obstacles. They happily took on many responsibilities and potential financial risks in order to fulfil their vision which turned out to

Photographs with permission of Stadt Bohmte, www.bohmte.de

# APPENDIX: 2

## CASE STUDY
BLAENAVON

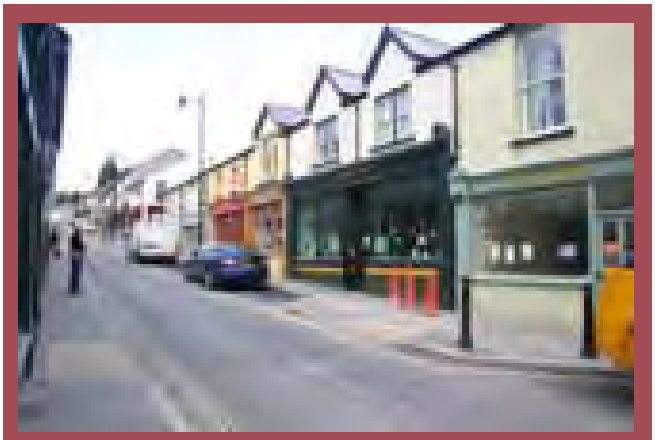
**In recent years Blaenavon has benefited from significant improvements to its public realm. While large parts of the improvements have been completed already, there are still many alterations to be made.**

Broad Street and the approaches from the various car parks into the centre currently form the main priority, with other areas to follow later.

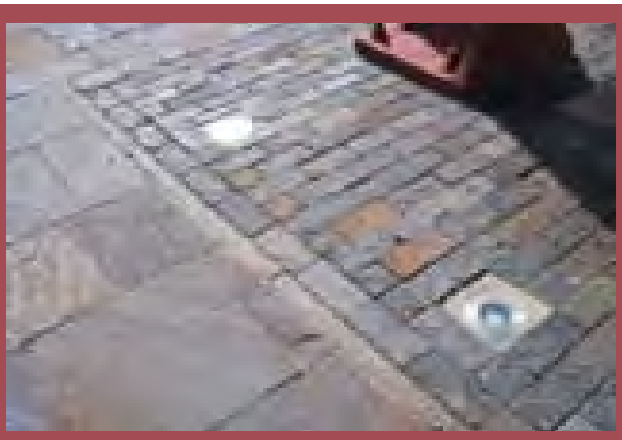
The main areas of Blaenavon start to form a high quality environment with the use of high standard elements as well as very appropriate street furniture. Despite the scheme being implemented fairly recently, it appears that it will prove to be a success in the long term with very durable materials and detailing in place and the maintenance requirements being kept to a minimum.

Alterations to the public realm have been made under the umbrella of the Blaenavon Regeneration Strategy with the Regeneration Team forming the core team regarding public realm issues. This specific distribution of responsibilities shows that local authority acknowledged the significant role the public realm plays in the regeneration of Blaenavon. The vision of a high quality environment has lead to the aspiration of installing adequate high quality materials and elements.

A materials palette with specifications was created that outlined all appropriate elements that were to be used within the scheme such as surface materials, furniture, lighting and CCTV. This palette was not adopted as Supplementary Planning Guidance. However, it provided an overarching frame for the project, gave guidance for everyone involved in the project and for guided smaller decisions along the way.



Enhancements to the building structure go hand in hand with public realm improvements; the streetscape is kept plain and uncluttered.



Prince Street: The use of different unit sizes allows to make a subtle distinction between different areas; uplighters allow to set certain elements in scene.

# APPENDIX: 2

The process of public realm enhancements was defined by the engagement of all key officers that have a stake in the public realm. Officers with expertise in landscape, transportation, conservation, planning and highway inspectors were among those who were engaged into the process from the early stages of the scheme. Any decisions on design and specifications were informed by short and long term considerations and every step was guided by the vision that was established among all involved and that everybody was buying into as result.

The quality of the scheme has benefited from the overview that officers in the Regeneration team had an on the plans as a whole as well as the implementation. The consistent communication between different teams in the council and the continuous engagement of a wide range of people raise the awareness of public realm issues and their importance for the regeneration of Blaenavon.

## Conclusion

While much of the funding has been made available due to Blaenavon's status as world heritage site, this will naturally be difficult to replicate in other towns. However, there has been a range of organisational principles that were applied to the regeneration and the public realm improvements in Blaenavon that could be adapted in other local authorities alike. The Regeneration Team in Blaenavon is known to be the main contact for public realm related issues and it appears the team is taking on the responsibilities that are linked to this role. The overarching knowledge of team members from strategy up to detailed plans ensures continuity in the implementation.

Broad Street: Signage mounted on lamp pole reduces clutter.

# APPENDIX: 2

## CASE STUDY
### DEVON COUNTY COUNCIL

**Devon County Council have taken practical steps to integrate the views of various professionals in the delivery of new streetworks and are currently refining these protocols to ensure an even more overarching and collaborative approach.**

Where traffic signs are inevitable, the choice of colour, size and installation can help reduce the impact, particularly within sensitive surroundings like in Exeter

### Conclusion

This case shows the added value possible when separate disciplines are located together in a common Directorate. It also highlights how a commitment to three dimensional and place specific design can help officers to engage in a process. The County Council has deliberately aimed for a learning process that identifies shortcomings and is developing programmes to address them. Public Realm and Highways aspects and their implications are considered in the wider context and an appraisal of competing issues at an early stage helps to identify optimum solutions for a sustainable future of each town.

Following the Designing Streets for People report of 2002, the County Council recognised the need to ensure that the views of a wide range of professionals were incorporated into all new streetworks.

At the outset of each financial year, potential projects are identified and for projects in sensitive locations arrangements are made for a range of professionals to attend initial design team meetings. These sessions help officers to agree the common principles to be established prior to any significant work taking place. This has helped Officers from different backgrounds to appreciate a wider set of parameters outside of their expertise.

As part of the design process, Devon County Council have established the need for an Environmental Audit carried out by urban design and planning officers to review designs prepared by engineers which run in parallel with Safety Audits. This process compliments the initial design team meeting and encourages schemes to take context and local character into consideration. This was aided by the fact that the engineering, conservation and urban design sections are located in a common Directorate.

The County Council are now considering how this process can be improved in light of the publication of Manual for Streets and LTP 01/08 'Traffic Management & Streetscape' and are researching how additional training and other improvements can enhance this process. This is supplementary to the case study outlined by "Streets for All: South West" (English Heritage, 2005) which outlined how new training measures were adopted by the Environment Directorate to address problems in implementation related to the skills shortage for laying types of traditional paving.

The Council is also in the process of developing "infrastructure frameworks" for the 28 market towns in Devon and the city of Exeter which are looking at infrastructure issues the county council has a statutory obligation or significant interest in, and which need to be embedded into the planning process at an early stage to identify growth options, town vision, objectives and associated infrastructure requirements and aims. Devon County Council is seeking for each town to identify the long-term public realm aims and objectives for each town so that public realm implications of each new development proposal and for the town as a whole as well as infrastructure requirements can achieve the wider aims and objectives and deliver more sustainable communities. This will also help in embedding public realm issues and requirements into the LDF, infrastructure and development planning process.

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# DETAILED DESIGN GUIDELINES

## Inclusive Design:

### Tactile Paving

Tactile paviors have been introduced into the street environment since about 1990 as an aid to the visually impaired. At present, there is no agreed British Standard for their design and use, but guidance is available from a variety of sources.

Tactile pavings may be made from any material commensurate with good street design with an emphasis placed upon providing material that has a contrasting colour to that adjacent.

Blister pavings are to be used on road crossing points. The guidelines indicate that a red material should be used at controlled crossings and buff at uncontrolled. Where the carriageway or the pavement is a similar colour to the tactile paving, it is recommended that a border (with a contrasting colour) should be provided around the tactile surface.

Where ramps and steps are required, a corduroy paving should be adopted where again a colour contrasting with the material adjacent is recommended.

It is often the case that the interpretation of the guidelines has led to a street scene where tactile paving can have a detrimental aesthetic impact. However, blister and corduroy materials are available in all of the material types that have been discussed in this document, and it should not present a difficulty to select materials for these purposes that are complementary to the street scene. In conservation areas, which are often stone paved, it has become common to install tactile studs at crossing points and the use of these should be considered.

### Street Furniture/Obstacles

A change of surface close to an obstacle can assist blind and partially sighted people with identifying obstacles such as street furniture, trees or planters. The change might be in terms of colour or texture. For example granite setts with a rough (cropped) face can act as a warning to proceed with caution.

### Footways/Hard Open Spaces

Hard surfaces should be firm and even with properties of slip resistance in both dry and wet weather. Steep cross falls, greater than 1:40 are to be avoided. Path widths ideally should be a minimum of 2.0m which will allow the passage of two wheelchairs. Short sections may be reduced to 1.5m with passing places. Footways ought never to be less than 1.0m in width and where necessity requires this, these areas should be kept free of obstructions and their length kept to a maximum of 6.0m.

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**Steps/Ramps/Handrails**

Steps should be designed with a minimum tread width of 300mm and a riser in the range 150-170mm. Isolated steps should be avoided and the width of each flight be a minimum of 1.0m. A corduroy tactile surface should be located at both the top and bottom of the step flight to a depth of 800mm set back 400mm to provide advance warning of the level change. The nosing of each step should be highlighted via an alteration in colour.

Gradients across paths and open spaces should subscribe to even falls where sudden alterations are designed out. Gradients greater than 1:20 are considered level approaches. Gradients greater than 1:20 should be designed as formal ramps. Gradients within these should not exceed 1:12 as a maximum. Landings should be provided at 5.0m intervals where ramps exceed 1:15 and be of a minimal length of 1.5m. The widths of ramps should not be less than 1.2m. A ramped pathway should be considered in the same way as steps.

Handrails should be provided to both sides of a ramp and steps to a minimum height of 900mm and no greater than 1000mm. Each handrail should extend 300mm beyond the top and bottom step to assist users. The diameter of the handrail should be between 40-45mm with a clearance of 50mm from its support. A colour contrasting with the surroundings will assist partially sighted users in locating the handrail.

## Specifications & Workmanship:

### Material Selection

When selecting materials the range of sizes and shapes available should carefully be considered in relation to the proposed design. Again, when selecting a variety of materials the compatibility with one another should be carefully considered. Both of these considerations shall have the end view of providing a homogenous and neat surface as possible with the products selected.

Contract documents including a specification and description of workmanship are commonly included within the contract documents between the client and contractor. These may also refer to relevant British Standards, current design guides and matters relevant to the particular contracting authority. The intention of these is to ensure that quality standards are met. The intention here is to provide additional guidance where shortcomings have been identified.

### Laying PC Paviors & Slabs

These are almost always supplied in standard size ranges and will frequently have a range of 'special' units associated with them as accessories, for example channels, edge blocks, corner units and in-filling units. There is quite a wide standardisation of the sizing of these supplied within each manufacturers range and between manufacturers. Consequently, for example, clay paviours may be used with pc slabs to provide patterns, or edgings to pathways and the same applies to different manufacturers of pre-cast products.

### Jointing

Mortar jointing between materials fulfils a variety of functions but principally it absorbs the irregularity in materials and provides rigidity between them. Mortar jointing is a common source of aesthetic and maintenance problems. Concrete paviours and slabs are frequently designed for butt jointing where the voids between units may be filled with a kiln dried sand. Where these kinds of materials are used, mortar jointing should be designed out wherever possible. Where the filling of joints with mortar proves unavoidable the jointing compound should be carefully considered from the viewpoints of strength, colour and finish. Colour should be adjusted to suit the adjacent materials, and the mortar should in no circumstances spill over the adjacent material.

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**Integration of Features/Cutting**

Commonly, attention to detail is neglected in the streetscape where reliance is placed upon the contractor to provide the detailing around features such as street furniture or for example sudden changes in levels at crossing points.

The quality of the streetscape, and the quality of sound materials is frequently compromised by reliance upon the Stihl saw to cut hard materials, the integrity of which is then compromised.

It should be an overriding consideration to apply a policy of minimal cutting to all newly laid materials. The means by which this is achievable are two:

Firstly, by design: Where appropriate, the surface patterns within the streetscape should be co-ordinated to the material sizes to avoid cutting. For example, where grids or trims are created the materials should be co-ordinated with these.

Secondly, by workmanship: Where the designer has co-ordinated the material sizes, the contractor needs to be briefed on the matter, so that actual site conditions can be accounted for and the design intention realised. Where these matters have not been identified or specified the onus must be placed upon the contractor to request guidance from the designer and to agree the most appropriate solution. Contractors operatives should not adjust materials by cutting to fit awkward situations without designers approval

**Stone Pavings**

The comments above apply equally in the use of stone materials with the important difference that stone materials are generally more forgiving in terms of their sizes and may be cut to suit actual conditions. Stone materials have a number of different characteristics that require further comment.

**Sawn Slabs**

Sawn slabs may generally supplied to a plan tolerance of +/- 2mm. The size range may be specified and these laid to a grid, linear or random pattern. In any of these events, paviours should always be designed with a joint taking up the amount of tolerance allowed in the production of the material. Joints should be 6-8mm and it should be strictly understood that these joints be filled to their full depth with an appropriate mortar.

### Riven Slabs

Riven slabs, especially where they are sourced from reclaimed supplies will not subscribe to the tolerances above. There most appropriate use will be where traditional materials are required and they will be of square cut but to random sizes and frequently variable in depth. Where the material has been newly produced the plan sizes may be specified but the depth is likely to remain variable.

The jointing of riven slabs will necessarily be wider than those for sawn stone, where a 10-12mm joint should be allowed.

Riven slabs are often objected to the grounds that;

- the surface is uneven and unsuitable for pedestrian use
- the surface is sometimes unstable and subject to flaking
- the depth is often variable leading to difficulties in laying
- the material is heavy giving rise to safety issues if it is to be manually handled

Quality control at source can provide material of an acceptable standard in line with a realistic specification. Manual handling is avoided by machine laying. It should be noted that riven materials and riven pennant sandstone in particular are amongst the most traditional of materials. Having fine aesthetic qualities and a local provenance, it should always be a considered pedestrian surfacing material in Valleys Towns.

### Stone Setts

Stone setts are available in a variety of materials. The material types recorded in the valleys are granite, York and pennant stone. Although sawn materials may admit to being laid without jointing, it will normally be desirable to provide a joint. When carefully laid and correctly specified, sawn setts may be used without any special problems in pedestrian areas where they can provide a means of variation and for edges and trims. They may be laid, with an appropriate surface finish, as a mass surface.

The most common stone setts are cropped granite, usually of Portuguese origin. These should be laid with a 10-12mm joint which should be entirely filled with an appropriate jointing compound. Mortars should never be allowed to adhere to the exposed surface of the setts. Laid as a mass surface this material is not considered satisfactory in pedestrian used areas due to its uneven properties. However, used appropriately as edging, as a warning (e.g. across road junctions), as a trim defining patterns, or as a means of accommodating street furniture, the use of this material is most appropriate, especially within conservation areas.

Whereas this material is not sourced locally, its use is widespread and has been for such a considerable period, that we would argue that it may be considered traditional.

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## Use of a Mason

It should seem an obvious matter when using natural stone materials, often of a bespoke nature that the services of a qualified stone mason should be retained. This, surprisingly, is almost never the case.

There are particular problems that are difficult to predict at the design stage and that is difficult to solve at the construction stage. For example, the issues of accommodating randomly placed service access covers, or level changes close to crossing points in stone materials will often lead to either poor detailing, or an excess of cutting of materials. The result is always unsightly and often the cause of maintenance problems later on.

Progress in solving these problems can be obtained with the inclusion in the contract documentation of a sum to be expended when required on the services of a qualified stone mason.

## Surface Water Disposal

The main source of surface water in the streetscape is rainwater from down-pipes. It is an essential requirement that surfaces are designed so that water run off is efficient and that water is nowhere allowed to form ponds or puddles.

Levels & Falls: In narrow pavements bordering roads the simplest method of water disposal is via falls across pavements to the road channel. In narrow pavements and open areas the gradient of fall will in part depend upon the quality of the surfacing where an easier gradient might favour a close textured, evenly surfaced paving material. In localised areas, including narrow pavements cross falls should not exceed 1:40. In broader areas an easier gradient should be adopted – no greater than 1:50.

Surface Channels: These fall into the category types – indented, dished (prefabricated) and composite (fabricated from setts or paviours to a dished cross section).

Pre-cast concrete indented channels should be avoided – they are never attractive and rarely communicate with their kerb terminus. Runs of them, merging, are not a solution to a drainage problem and should never be installed. Where these channels are installed they should be manufactured to an approved profile in an appropriate stone material. They should generally only be used in a narrow pavement situation, and should not have ‘tributaries’. An appropriate co-ordinating kerb unit should be supplied – the carving of dishes or indents in existing kerbs shall not be allowed.

Composite channels are typically installed as a triple dished row of stone setts, or similarly in pcc paviours or bricks inclined to form a channel. Often these channels may serve a secondary and often valuable purpose in the patterning of the surfacing materials, in defining boundaries or as an edge restraint. Channels of these kinds should be laid upon a concrete bed preferably outside areas where vehicles might overrun them. Channels of pcc paviours or bricks are often susceptible to damage due to the awkward arrangement of the units and should be avoided and a 'special' dished channel used instead.

Dished channels are preferred. They should be supplied as accessories when specifying clay or pcc paviours. They should be designed and supplied as a bespoke item when used in conjunction with stone materials.

Where dished channels are used, the depthof channel should be minimal and no greater than 5mm.

**Gullies**

Positioning: Where feasible, surface water should take advantage of existing road gullies and shall be directed via levels, falls and channels to these locations. Where it is necessary to introduce new gullies, the number of these shall be kept to a minimum. Where these are not associated with channels, they should be located at logical points at the extremities of the space outside or at the margins to the pedestrian and ambulant circulation area.

In our initial analysis, we observed instances of gullies being positioned in central locations that served no obvious purpose. Elsewhere, gullies that had a purpose had been positioned in central locations and were judged hazardous. In these cases, these gullies should be identified, and either removed entirely or re-located.

Gullies in general should be positioned outside of the main pedestrian circulation areas and also, principally to avoid damage, outside of any areas overrun by vehicles. Roadside gullies should never be located in the line of crossing points

Gullies should be selected and specified that are appropriate to their purpose in terms of shape size and strength. Roadside gullies in particular should be sized appropriately. For example, where there is a roadside channel the gullies should be specified in a co-ordinating size

Within surface water channels, gullies should be supplied either as an accessory to the paving type or sized and shaped as a co-ordinating unit. Bespoke stone channels should be designed for a specific gully type.

Gully gratings can represent a hazard to pedestrians, cycles and

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wheelchairs. Gratings with linear apertures should be aligned against the pedestrian or cycle flow. Consideration should be given in these areas to gratings with grilled or slotted apertures.

**Slot drains**, with a continuous narrow steel aperture combined with a sub surface falling channel have become prevalent in recent years in hard open spaces, or at low points in pavements. The advantage of these drains is that they are visibly discrete and allow the homogenous surfacing in the streetscape. These kinds of drains may be used in association with uniformly surfaced materials. Care should be taken where the drain is associated with a rougher material – cropped setts or riven slabs – the interface between paving and steel aperture is likely to be the source of maintenance issues. These drains are designed to be used in a linear fashion. They should never be installed to run across the general alignment of paving and they should be installed in co-ordination with a specific paving material.

**Ako Style Drains:** Similar in many respects to slot drains a removable steel grille takes the place of the slot. The comments above apply equally to these drains with the added comment that the steel type should be carefully considered in relation to its surroundings and the attention paid to the grille size where wider grille apertures should be avoided etc.

**Downpipes:** Downpipes from buildings were identified as a common source of problems. Normally the pipe will face a channel. It is often the case that the pipe has broken and not been repaired, that there is no associated channel, that the pipe and the channel are not aligned, that the pipe end is faced away from the channel.

The preferred solution to these problems is to repair the down-pipe and install a dedicated over-ground or sub-surface channel.

## Sustainable Urban Drainage Systems:

**SUDS** (Sustainable Urban Drainage Systems): Emphasis in recent years has been placed upon allowing rain water to be collected and dissipated over a period of time, often naturally through the substrate so that flow rates in rivers and streams locally are not affected. These systems are particularly useful in large open hard landscaped areas – car parks being an obvious example.

There are two basic types of Suds
- *sub surface water retention systems* and
- *water attenuation systems* where surface water is drained to swales. For new areas of hard landscaping consideration should be given to installing a SUD system.

Swales as a means of rainwater infiltration can form an integral part of the landscaping; an early consideration in new landscaping schemes ensures functional as well as visual qualities

Although not appropriate for every location, permeable paving in car parks can reduce the amount of water runoff considerably and make the infiltration process as local and direct as possible

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## Maintenance and Cleaning:

**Maintenance**

Damage to paviours will generally be due to the overrunning of areas by vehicles for which the surface has not been designed, settlement of sub-bases, damage by cleansing equipment which is dealt with below, or damage by utilities contractors which is a matter dealt with elsewhere in this document. In each of these cases it is important that the Local Authority has a system set in place to speedily identify problem areas and to promptly rectify these problems.

**Litter Collection / Litter Bins**

Town centres will require the emptying of litter bins daily along with a strong presence from litter-pickers, whose high profile presence will act as a psychological deterrent to litter-droppers.

**Cleaning**

A persistent observation made with regard to all paved surfaces throughout the valleys towns is that of the discolouration and pitting of surfaces along with the bug bear of local authority street cleansing departments – chewing gum.

Unfortunately, a considerable portion of this problem is attributable to the kinds of cleansing equipment used.

For example, pressure washers should almost never be used on stone or pre cast surfaces. Even occasional use of these will pit the surface of the stone or concrete and destroy any jointing compounds. Equally vacuum sweepers should not be used where surfaces are unbound and even then damage will frequently occur. We should recommend that a fairly rigorous cost benefit analysis be undertaken where industrial street cleaning equipment – steam cleaners, pressure washers, vacuum cleaners etc are to be used.

Within the selection process for new materials should be included an assessment of the manner in which they are to be cleaned and maintained. To prevent the ingress of oils there are a variety of proprietary sealants that aid in the prevention of oil impregnating the surfaces of both stone and pre-cast materials. Other products available will help seal the surface joints of pre-cast paviours limiting the loss of material where there sand filled joints are to be overrun with vacuum cleaners or subject to pressure washing.

The most effective way of cleaning streets is via water – gently hosing the street regularly removing dust and dirt and allowing water to evaporate.

A solution to the removal of chewing gum has not yet been discovered. However, we do consider that the attempt to clean this adhesive from paviours frequently causes considerable damage to the surface. In fact, although it is unsightly chewing gum will come off naturally in time with water.

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