The Brent Placemaking Guide
Achieving excellence in the design of the public realm

Committee Final Draft

The Brent Public Realm Design Guide was written by John Dryden of the Brent Council with Urban Design Skills Ltd. Thanks are due to all members of the Council's Public Realm Sub Group and the many other Brent staff whose contributions were invaluable.

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URBAN DESIGN SKILLS

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Foreword

The Brent Placemaking Guide has been developed in order to support and advise all Council staff whose work impacts on the design of the public realm. It will also be an important document for the wider community outside the council, including local groups, residents, local businesses, contractors and developers.

A well designed and high quality public realm is essential to creating good places and strong communities. We want our town centres and neighbourhoods to be successful places; places which have character and vibrancy, places which are safe and sustainable, places which are connected and accessible. To achieve this, the guide advocates a new approach to the design of our streets and spaces, an approach based on good urban design or 'the art of making places for people'. It needs to be understood that urban design is not just about how our streets look and what style of street furniture we choose to use, it is equally about how places work in a sustainable way. As such, good urban design can deliver important social and environmental benefits and contribute towards public health, a more inclusive environment, and the quality of life.

Ensuring that Brent's streets are well designed should be a priority of everyone involved in shaping and maintaining Brent's built environment, that is the whole community. The application of the simple but robust principles outlined in the guide will be invaluable in this respect.

Councillor James Powney
Lead Member for Environment, Planning and Culture
Brent Council

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Definition: The public realm covers all the spaces between buildings to which the public has access.

Purpose of the Guide

The Brent Placemaking Guide is about delivering excellence in Brent's public realm through good urban design. It is about making Brent a successful place.

The guide aims to achieve a safe, attractive, accessible and inclusive environment by setting out public realm policy and design guidelines and specifications for materials, street furniture and the layout of streets and spaces that fall within the control of the Council.

It seeks to develop civic pride and foster a sense of public ownership in the streetscene and looks at ways of encouraging the use of streets and spaces for community activities.

Finally, the guide tries to 'tread lightly' and avoid an over-prescriptive approach relying to a certain extent on the imagination and professional judgment of officers and others having an influence on the public realm. It does not provide rules to be broken but rather tries to help deliver a greater understanding of the need for and the benefits of good public realm design.

Sketch for Harlesden Public Realm Scheme

The guide is intended to deliver a base level of high quality and stylistically consistent public realm throughout the borough. It looks to make the average street in Brent, above average.

It is recognized however, that a more individual and bespoke approach may be appropriate in specific locations within the borough, for example town centres. However, the overarching design principles, objectives and approach outlined in the guide are applicable universally within Brent and reference should always be made to the guide when developing public realm proposals in any area of the borough.

"Good urban design is essential to deliver places which are sustainable on all counts: places that create social, environmental and economic value. Ensuring that places are well designed should be a priority of everyone involved in shaping and maintaining the built environment."
Urban Design Compendium

Town Centres

It is expected that for local town centres such as Wembley, Willesden, Kilburn, Harlesden, Kingsbury and Neasden, Local Area Design Guides will be produced, similar to that adopted as planning guidance for the Wembley Café Quarter.

Conservation Areas

Brent has a number of conservation areas across the borough and each has its own unique identity and character. The Council's Planning Department provides advice in this respect and may produce specific design guides for individual conservation areas which seek to preserve and enhance the established identity in these areas.

New Development

Proposals for new development will be expected to adhere to the design principles and approach given in the guide and any streets or spaces to be or likely to be adopted by the Council should conform in terms of design, materials and construction with the guidance provided in this document.

For developers, the inclusion of well designed public areas in development proposals can result in quicker and less costly planning permissions which have wide public support.

Red Routes

The A406 North Circular Road is part of Transport for London's (TfL) Red Route network. Any proposals relating to this road should be in accordance with TfL's Streetscape Guidance 2010.

Who is the Guide For?

The primary purpose of the Placemaking Guide is to advise and inform the decisions of officers engaged in works affecting Brent's public realm. However, successful urban design depends on different professional disciplines working together and in collaboration with a wide range of other people whose views and decisions matter. The guide is therefore also of relevance to councillors,, council officers in many departments, contractors, developers, statutory authorities, local groups, residents and businesses.

Kilburn Streets for People Scheme

How the Guide is Organized

Parts 1-4 provide an overview of the principles, objectives and methods recommended for achieving excellence in Brent's public realm. Common issues of concern, such as cost and risk, are discussed as is the contribution good design can make in establishing and maintaining vibrant local communities. The relationship between urban design, sustainability and street management/ maintenance is explained.

Parts 5-10 cover the materials used in the construction of the public realm, the street furniture placed within it and other "physical interventions" such as traffic management and calming, parking, signage and tree planting.

Part 11 includes a series of "before and after" images illustrating how Brent's public realm could look if the content of the guide is applied.

Wembley Town Centre

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"Urban Design is the art of making places for people. It includes the way places work and matters such as community safety, as well as how they look. It concerns the connections between people and places, movement and urban form, nature and the built fabric."
By Design: Urban Design in the Planning System

What is Urban Design?

The guide advocates good urban design, but what exactly is urban design and why is it important in the delivery of successful places?

It needs to be understood that urban design is not a new profession occupying a niche somewhere between planning, engineering and architecture. Rather it is a process, a way of thinking and a way of working. As such, anyone making decisions, carrying out works or promoting change relating to the design, management and maintenance of the borough's streets and spaces is contributing to this process. The guide essentially provides a framework to support the process of good urban design in Brent.

In essence, urban design is about places; how they function and evolve sustainably, how to make them vibrant and vital, how to look after them. Urban design is also about people and communities; and improving the quality of life by providing an attractive and safe street environment and enhancing people's experience of their local neighbourhood.

Benefits of Urban Design

Unlike, for example road accident savings, it is difficult to place actual monetary values on the 'return' from investment in good urban design: what price an improved quality of life or an increased sense of well-being?

However, the widespread benefits of urban design are beginning to be recognized and quantified and there is growing evidence of economic, social and environmental improvements which can be achieved by making places better for people. For example, recent research has begun to highlight a potential public health problem associated with vitamin D deficiency, the result of people spending to much time indoors and away from natural light. Clearly, the creation of a more attractive, safe and pleasant public realm will encourage people to spend more time outdoors.

In this respect it should be noted that many of the benefits of good urban design will occur in the medium to longer term. This will include improved mental and physical health, increased cultural activity and reduced crime rates. A consequent reduction in expenditure on health and social care should also result.

Bollard / seat

Urban Design Principles

The guide is grounded in the principles of good urban design as set out in By Design (DETR, 2000):

- Character (a place with its own identity);
- Continuity and enclosure (a place where public and private spaces are clearly distinguished)
- Quality of the public realm (a place with attractive and successful outdoor areas)
- Ease of Movement (a place that is easy to get to and move through)
- Legibility (a place that has a clear image and is easy to understand)
- Adaptability (a place that can change easily)
- Diversity (a place with variety and choice)

Urban design also embraces the concept of the 'gestalt' which states that a whole pattern or structure is perceived as something greater than simply the sum of its separate parts i.e. we tend to view our street environment, not as a collection of various bits of furniture, kerbs, paving and trees, but when well designed as a single harmonious entity.

A New Approach

There is a growing awareness amongst professionals that a new approach to the design and management of our streets is necessary in order to create better places; places with character, places with identity, places that are not dominated by motor vehicles and overwhelmed with traffic signs and street clutter.

The new approach recognizes that for far too long the design of the public realm has been largely dictated by the movement function and the accommodation of motor vehicles. While it is recognized that making provision for vehicular traffic is vital to the smooth functioning of our urban environment and local economies, the design of our streets must take into account the needs of all users and be more focused on people, place and environmental quality.

A number of important recent publications giving guidance in this respect include:

Manual for Streets 2, Department for Transport 2010;

Manual for Streets, Department for Transport 2007;

Traffic Management and Streetscape, Department for Transport March 2008;

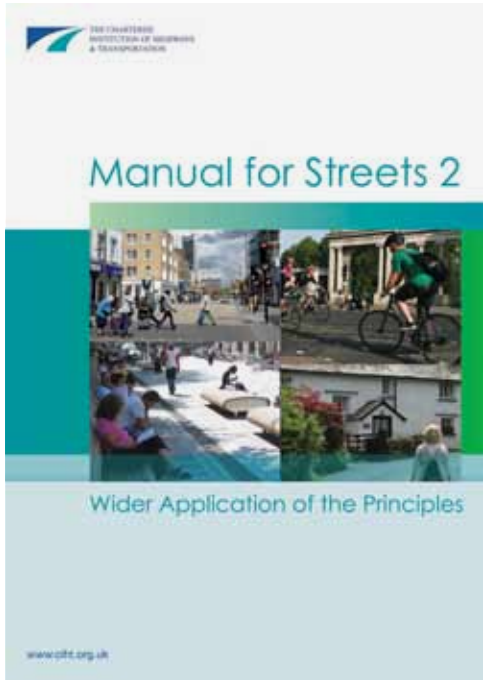
Making Design Policy Work ,CABE June 2005;

Civilised Streets, CABESpace 2008;

By Design: Urban Design in the Planning System: Towards Better Practice. DETR

"Because well designed streets must be sensitive to location and context, the key to their successful creation is found less in highway design manuals than in the imaginative application of certain principles to the design of the public realm…street design should not draw attention to itself. It should be based on simple and robust principles which reflect the characteristics of London and its neighbourhoods."
Better Streets, Mayor of London

Manual for Streets 2



Better Streets

The Mayor and Transport for London

London-wide guidance on the design of major traffic arteries is given in Transport for London's Streetscape Guidance which has recently been revised.

November 2009 saw the publication of London's Great Outdoors – A Manifesto for Public Space where the Mayor sets out his ambition to work with the boroughs "to revitalize public space to make a big difference to London's quality of life."

Its sister publication: Better Streets – Practical Steps provides design guidance and is intended to "help make the vision for great spaces a reality".

Both of these documents provide an important recognition of the way in which thinking about the design of our streets and spaces is radically changing. They also recognize that the design and the use of our streets can achieve important social objectives, knit together disparate communities and "make for more humane interaction in our cities".

Better Streets recognizes that improvements in street design can be achieved at a range of different spatial

scales "from internationally significant projects such as Trafalgar Square at one end, to the improvement of a local parade of shops at the other. Indeed it is often these local schemes that will have the greatest impact on the quality of life of people living and working in London."

"In the recent past, there has been a tendency to view design solely as a visual concern – just about what things look like and what style they are. This fails to consider the important social or environmental dimensions of design, such as the potential for high quality public realm to contribute to public health, a more inclusive environment, quality of life and the sustainability agenda."
Making Design Policy Work. CABE

Good Public Realm creates good places (Waterloo)

The Place Function

The Manual for Streets (DfT, March 2007) makes a key recommendation that increased consideration should be given to the 'place' function of streets in order that a better balance between different functions and street users is achieved".

As such, a 'place-based' approach seeks to balance the needs of different users and takes into account the quality of the built environment and public realm. A place-based approach considers the question 'What kind of place do we want this to be?' and takes appropriate actions on many fronts to deliver that vision. It does not focus on one or few specific issues, address them first, and then make the best of what's left over.

Harlesden Town Centre

"Good design need not cost more, and may save money through fewer traffic signs, road markings and related equipment and street furniture."
Traffic Management and Streetscape, Department for Transport

"…road safety regulations and design guidance, the latter which can be produced by just about any official, professional, or special interest lobby group, are not flexible enough or intended to allow a traffic or highway authority to balance streetscape and other public realm design issues against the seemingly blanket requirement to include every conceivable "safety measure" in every situation, no matter how appropriate or relevant. The overriding view seems to be that some safety measures are good but more is better, with the principle purpose of making it harder for road accident victims to bring successful litigation against authorities and possibly their staff."
Craig Wilson, Royal Borough of Kensington and Chelsea: Written Evidence to the Select Committee on Transport (June 2002)

A Shared Vision

In order to achieve a successful public realm there must be a shared vision of good design at all stages of the design process from the inception of ideas; through to the proper delivery of the design on the ground; and planned maintenance and management.

It is common for decisions to be made during the design process in isolation and separate from those who are responsible for the care of the public realm. At the outset of any public realm scheme dialogue must be instigated between the designers, those who construct or place objects within the streetscape; and individuals or teams that clean and maintain our streets and spaces. Collaboration among these various individuals and teams demonstrates good practice and is required to ensure that the design process leads to desired outcomes and to continuous improvement of quality.

When designing schemes consideration must be given to how our streets and spaces will look and function in the longer term. Street furniture, paving and street layouts will have an effective life of 10 to 30 years or longer. Design decisions must therefore take into account the need for quality of installation, durability of materials and maintenance regimes.

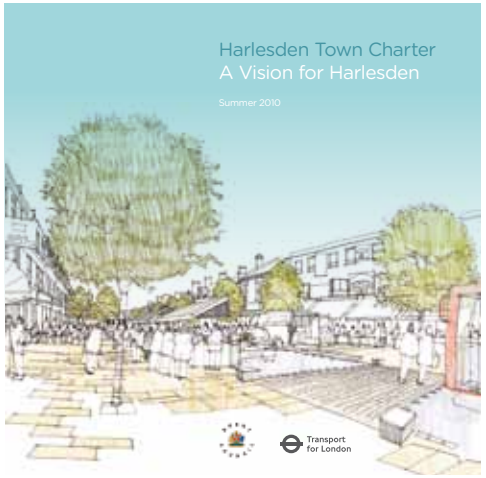
Engaging the Community

Perhaps the most important member of any design team is the community. Local people provide an understanding of how a place works, it's strengths and weaknesses. They can also provide knowledge of local history and events which have shaped the character of a particular local area.

When changing or remaking an existing street or space, a positive outcome can only be achieved if people living and working there are involved positively in the planning, design and implementation of the scheme. People need to feel informed, engaged and empowered to play an active role in shaping the development of their local area.

Consultation on street schemes should ask 'What would you like your street to be?' To help answer this question the local community must be encouraged to engage in and contribute to the design process at every stage of a scheme's development, including:

- Understanding the issues;
- Identifying and balancing priorities;
- Developing options; and
- Agreeing a final design.



The Harlesden Charter


Harlesden Community Engagement Workshop

"The design of public space exists in a world of uncertainty…these uncertainties do not inevitably lead to a culture that purposely avoids risk in public space design. Safety is achieved through active use, citizen surveillance and an engendered sense of personal and social responsibility and ownership. A safe place can still be physically challenging and push the boundaries of accepted design."
Living with risk:promoting better public space design, CABE 2007

The required public involvement can be achieved in many ways, for example through exhibitions, community workshops and public meetings. Visual material such as models, photos of best practice, photomontage, artists 'before and after' sketches and samples of materials are useful tools.

The community engagement process must include everyone who may have an interest in or be affected by a proposed scheme. This includes:

Residents including children and teenagers

Local Businesses

Police and Emergency Services

Utility companies

It is almost impossible to achieve unanimous agreement among a local community for a proposed scheme, there will always be differences of opinion between individuals or local groups. However consensus can be achieved by raising awareness of how problems might be addressed and by being totally transparent in the decision making process.

Striking A Balance

Accommodating the movement of vehicles and pedestrians is an important function of the street. However, the implementation of traffic management features, without considering the impact of such action in urban design terms, can lead to a fragmented, overcomplicated and unattractive public realm characterized by a multitude of unco-ordinated signs, lines, posts, nibs, bollards and guardrailing. A balance needs to be found between the movement function of the street and other design considerations.

The weighting given to these considerations will depend on the nature of the scheme and location for example whether the scheme is for a highly-trafficked road or a quiet residential street. Nevertheless, a similar level of care and attention to streetscape and urban design issues is required for all schemes, of all sizes in all locations. In this respect, there are no special cases.

It must be accepted that all schemes carried out in the public realm will have an impact on the streetscene and that

Above and right: The needs of traffic and other road users should be balanced

in all cases the 'designer' is responsible for ensuring that full consideration is given to how the scheme fits in with its environment in urban design terms and to how it relates to other planned or programmed schemes being developed elsewhere within the council. The role of the design champion is crucial in this respect.

A Philosophy of Care

The quality of the public realm, no matter how well specified and designed initially, must be sustained by a responsive, adequately funded and coordinated street management and maintenance regime. The "value" of a good quality environment, free from litter, clutter, graffiti and broken or damaged street furniture and paving, should not be underestimated. Behaviour is influenced in part by how people feel about a place. In well designed and managed environments that meet community needs, people tend to feel safer and more comfortable than in neglected street environments.

A philosophy of care needs to be adopted by all Council departments and other agencies whose actions impact on the public realm. All those involved in making decisions about the public realm must focus on higher standards and continuous improvement and work together towards the common goal of a good quality streetscene.

A better understanding of the design process can lead to a reduction in the costs of maintenance. For example, designers should consider aspects such as the accessibility of schemes by street cleansing teams and how to better facilitate the cleaning process. For example, the need for expensive strimming instead of mowing can be avoided by placing street furniture on hard standings instead of on grass verges.

"The absence of segregating elements requires a re-prioritisation and negotiation of the space, regardless of the means of transport. It has been shown to improve road safety through the harmonization of traffic speeds, introducing an element of uncertainty."
Thomas Derstroff, Paper to Traffic Management conference. March 2009

Risk and Cost – Barriers to Good Design?

Risk and cost are often cited as reasons not to pursue a place- led approach to street design which may be considered at odds with more 'traditional' methods adopted in the past.

Officers may be concerned that they could be liable to litigation claims if they divert from the well worn path of, for example, erecting the maximum number of traffic signs in order to 'cover all' situations. Likewise, the widespread use of pedestrian guardrailing can be seen, at least in part, to have arisen from a risk-averse approach to pedestrian planning.

In both cases, however, the outcome is likely to be a cluttered and defensive environment which provides too much information for the average road user to clearly comprehend and barriers to pedestrian movement under the guise of protection.

The Manual for Streets suggests that such an over-cautious approach, where designers strictly comply with guidance regardless of its suitability, is detrimental to innovation and is not conducive to creating distinctive places that help to support thriving communities and that it is easier for those engaged in making decisions about schemes to justify a decision that avoids risk than a decision that uses risk creatively.

There is a need to challenge the justifications for the easy decision rather than being warned off a more demanding one. This requires a clear design vision for any scheme, supported by strong design leadership.

With respect to fears of litigation, it is worth noting the judgement reached in a recent court case (Gorringe v Calderdale MBC 2004) brought against a highway authority for failing to maintain a 'SLOW' carriageway marking on the approach to the sharp crest of a road. The judgement confirmed the following:

- the authority's duty to 'maintain' covers the fabric of the highway, but not signs and markings;
- there is no requirement for the highway authority to 'give warnings of obvious dangers'; and
- drivers are first and foremost responsible for their own safety'.

With respect to cost, there is a need to ensure that the design and construction of our public realm represents good value for money. The design guide advocates a simple design approach using a limited palette of standard materials and a reduction in traffic signage and other traffic management kit, for example bollards and guardrailing. As such, the 'less is more' approach should reduce costs relating to the manufacture and purchase of signage and street furniture and the associated maintenance costs.

Less is More and the Use of Ambiguity

As previously suggested, the proliferation of signs and lines on our streets has largely resulted from the belief that the more information and safety measures installed the safer a street will be. Similarly, it might be argued that any reduction in signage or guardrailing is likely to result in an increase in accidents. Neither of these views is particularly sound.

Streets can be designed to be both safer and more attractive, if the design reflects a comprehensive understanding of how different users act and react in the location in question.

Taking the example of guardrailing, there has in recent times been a change in professional opinion against the default installation of guardrailing. Yet, reasons given for the non-use of guardrailing are often focused too simply on aesthetics: that guardrailing makes for an unattractive streetscape. Even when arguments about pedestrian convenience are added, there is still an underlying assumption that guardrail removal is likely to lead to a deteriorating safety record. However recent experience, in for example Kensington High Street, Mare Street Hackney and Mile End has shown that when carefully designed this is not the case. Schemes introduced in these areas have shown that streets designed to achieve a balance between the needs of different users, rather than simply to segregate them wherever possible, can actually be more walkable, more attractive and safer.

Referring back to the Gorringe v Calderdale BC case, the ruling there stated that: "Where things appear dangerous individuals take more care; where the appearance is one of safety individuals may drop their guard and accidents ensue."

Walworth Road

New Road, Brighton

Waterloo

In streets characterized by a large quantity of highway and road safety kit, such as guardrailing, signals, signs and lines, users of all kinds are given the false impression that 'the engineers' have taken care of their safety and that all they need to do is simply "read the signs". In such situations, users may be less attuned to what is actually going on around them. Their awareness of other users may be reduced and eye contact is minimal.

The "less is more" approach advocated in the guide encourages ambiguity through a reduction in information. By blurring the lines of priority all road users will need to become more circumspect and learn to move through an area primarily by observing the behaviour of others, rather than by a simple "green means go" attitude to driving. Evidence suggests that the removal of traffic signals can make a junction safer as drivers need to be much more aware of other road users and passage is negotiated by eye contact, signaling and courtesy.

Unpredictable events happen on our streets. A child may run into the road, a car may pull out unexpectedly from a side road. The likelihood of such events resulting in an accident is reduced when ambiguity is used as to a certain degree everything becomes less "predictable". Clearly such an approach would not work everywhere, but in lightly trafficked residential and shopping streets it's use is entirely appropriate

The primary challenge in developing a successful public realm is to transform the design of streets in ways that change the 'culture of use' on them. All users must be made fully aware of the need to watch out for others and of the fact that they do not have a dominant priority.

Clearly, this is not a simple matter of just removing signs. A variety of other measures will be needed to communicate the message to all users that the nature of a street, and consequently the way in which they should use the street, has altered. This may include physical speed reduction techniques, more formal and informal pedestrian crossing facilities, greater use of shared surfaces, carriageway tree planting and designing parking arrangements which act as de facto traffic calming.

3 Streets and Community

Public Realm Objectives

Within the context of the overall design goal of achieving excellence in the public realm together with the new design approach and 'thinking' outlined above, a series of related objectives for the design of the public realm have been developed. These are grouped under the three headings of Design, Style and Community. The means to achieve these objectives is outlined in the following chapters.

"London's "streetscape is now one of spikes which are anti-seating, anti-climb, anti-skateboard, anti-pigeon, anti-terror – surfaces defined more powerfully by what they are against than what they are for. This is not a city that yields easily to comfort, despite the increasingly loud rhetoric of accessibility. It can be a hard city to use casually, in which to saunter. That there is no passeggiata is no accident."
From City of Surprises by Edward Heathcote (Financial Times architecture correspondent)

Design

- **Coherent and consistent approach**
- **Base level of quality**
- **Sustainable**
- **Easily maintained**

Style

- **Simple, uncluttered, functional, aesthetic**
- **'Less is more' (limited palette of good quality materials and street furniture)**
- **Co-ordinated elements and reduced street clutter**
- **Local character (protect and enhance Brent's identity and branding)**
- **Celebrate the borough's diverse cultural heritage**

Community

- **Inclusive, safe and accessible environment for all**
- **Improve civic pride and ownership of the public realm**
- **Public spaces as focuses for activity**
- **Enhance users experience and interaction with the public realm**

"Our design and planning policies should seek to create an urban realm that places great importance on leisure and creativity."
Boris Johnson/Baroness Andrews, Open Space Strategies
Mayor of London/CABE Space 2009

Streets for All

Good urban design creates good places. Places which people enjoy being in, places where people would want to linger and interact socially, places which stimulate curiosity and encourage exploration. Public streets and spaces form the physical heart of our society and the place and community function of our streets and spaces needs to be considered in parallel with the movement function. The priority given to the movement and place functions should be considered in relation to place/movement hierarchy given in the Manual for Streets (shown overleaf).

Local streets and spaces should be safe and secure, and conditions must be provided where parents can allow their children to play safely outside of the home and explore their local surroundings. How can children be expected to gain an understanding of the world in which they live if they do not have the freedom to experience their own street?

Streets should be good places to simply walk or exercise. In our local centres we need to embrace the idea of "passegiata", the Italian ritual of a gentle early evening walk and provide a public realm which encourages this. We need to ensure that pedestrians can "move and rest", the judicious and generous provision of street seating is important in this respect.

The principles of inclusive design need to be followed to create streets which are accessible and used by as wide a range of people, including people with mobility or visual impairments, people with learning difficulties, children and the elderly. However, as CABE has pointed out in their publication Civilised Streets (2008):

"even with good design and resources it may often be the case that what is welcomed by one group of public space users will be disliked, or avoided by others, For those designing or commissioning streets in most public places, a judgement will need to be made that balances the needs of all users."

Willesden Green proposals sketch

Kensal Rise local public space

Kilburn Streets for People

Kilburn Streets for People scheme

The key words here are judgement and balance. The designer needs to use professional judgement and adopt an holistic approach to deliver a public realm the design of which is not hamstrung by single issues but balanced with respect to all users in relation to the hierarchy of users promoted through the Manual for Streets, which is:

Consider First

- Pedestrians
- Cyclists
- Public transport users
- Specialist service vehicles (emergency services, refuge vehicles etc.)

Consider Last

- Other motor traffic

Shared Space

One method of balancing the community and movement functions is through the use of shared space. In contrast to previously accepted design practice which has promoted the segregation of uses, the shared space approach strives to combine, rather than separate street functions, in a way which provides a more equitable balance between motorists and other street users. It looks to improve the quality and experience of streets and spaces without needing to restrict or banish motorized traffic, a practice which has resulted in pedestrianised town centres being deserted and edgy places after dark.

The shared space approach uses the principle of ambiguity to change driver behavior; drivers need to respond, not to a set of predetermined traffic rules and signs but to local conditions “as they find them”, so behavior is largely determined by the physical environment and the behavior of others, in this respect eye contact and mutual signaling is very important.

Many shared space designs have dispensed with the use of traditional kerbs and level changes using instead some form of tactile or textured surface to indicate the division between pedestrian and vehicular space. However there is no ‘one size fits all’ template for shared space and any design needs to consider the specific nature of the location including predominant street functions, the volumes of people and traffic, the proportions of heavy goods vehicles and the speed of traffic.

While there are many benefits associated with shared surfaces their design should not disadvantage key groups of users such as the blind and partially sighted people. This particular issue is the subject of much current debate and research, and designers should refer to the latest advice and examples of good practice when preparing shared surface proposals.

Shared Space Seville, Spain

Open Space

Wherever we live, our neighbourhood should be somewhere we want to be and are happy to belong to. Our open spaces are key to this, meeting a range of social, environmental and health benefits as well as making areas more attractive.

Our approach should be to integrate open spaces into the heart of our physical environment, through both partnership working and effective community involvement. Our design and planning policies should seek to create and urban realm that places great importance on leisure and creativity. Creating and maintaining high quality open spaces is central to this idea.

The design of our parks and open spaces should also seek to maintain and enhance the ecological and biodiversity of an area. This can be achieved in a number of ways including:

- The retention of existing vegetation and water features;
- Using natuive trees and polants;
- Linking green spaces to provide 'green corridors';
- Protecting and creating new habitats for wildlife; and
- Integrating sustainable urban drainage into open space design.

Open space

Move

Move and Rest

We need to try and create a street environment which encourages "move and rest". Opportunities should be taken both within the existing street network and through new development to create small and attractive spaces where people can sit and rest for a short while. The provision of such spaces is of major importance to the elderly, people with mobility difficulties, parents with children etc., however there is a public concern that such spaces can encourage anti-social behavior, particularly street drinking. However, the response to such concerns should not be simply to avoid providing, for example seating, but to seek other social solutions for example the introduction and enforcement of 'drink free zones'.

Rest

"Are the decisions we are making about how to design our cities making us less happy and more fearful as a result?"
Ground Control. Anna Minton 2009

Active Streets

A good public realm is an active public realm and this needs to be reflected in the design of our streets and space

Pavement Cafés and Extended Shopfronts
Allowing the use of the public footway for licensed and controlled pavement cafés and 'extended shopfronts' can add vibrancy and vitality to the public realm and such activity should be actively encouraged in appropriate locations. However, where encroachment onto the public highway is unlicensed and inappropriate to its location, pedestrian movement may be obstructed and a sense of decline and poor quality can result.

In considering applications for licenses, consideration should therefore be given to maintaining the pedestrian clear path appropriate to the location and to the accessibility needs of people with physical and visual impairments.

Street Markets
Markets can be daily, weekly, seasonal or annual events along a street or in a public space. There is currently a renaissance of markets in the UK related to specialty and themed markets, such as French markets and farmers' markets.

A key benefit of local markets is their ability to attract the majority of their business from the local community: Broadway Market in Hackney, for example, attracts over 80 per cent of its trade from the two local postcode areas, and most people walk or cycle to the market.

Market streets and spaces must be designed to be attractive on both market and non-market days. Good accessibility needs be provided to and between stalls; the area between stalls should be a minimum of 3.0m.

Markets streets should be designed as 'shared space' and white painted pitch markings should not be specified as they can make a space look unattractive when the market is not functioning.

Vehicle parking and access should be considered for market traders. Informal layouts may be sufficient; Hackney's Broadway Market traders are informally allowed to use their vehicles to block side street entrances to the market. This provides an effective motor traffic exclusion measure and gives traders access to their vehicles. Short stay cycle parking should be provided nearby.

Temporary and Community Events
Similar to markets, temporary events such as carnivals, parades, street parties, celebrations and running or cycling races contribute to the vitality and sense of community throughout Brent. Such events will need to identify specific requirements. Streets and spaces used to hold temporary events should be assessed against necessary requirements such as electricity, accessibility, lighting, safety, parking (if required), services (toilet facilities, waste collection), and security.

Brent Cultural Strategy
The guide supports the Cultural Strategy for Brent, published in 2010, which seeks to enhance cultural vibrancy and increase participation in cultural activities in Brent.

Wembley Street Market

Harlesden shop front

Market produce

"Play does not and should not only happen in playgrounds, so authorities need to consider how to create a more child friendly public realm overall."
Designing and Planning for Play, CABESpace October 2008

"If we see children playing in the street, we are more likely to slow down than if we saw a sign saying 'Danger, Children!'."
Hans Monderman 2006

Play

The presences of children playing safely and happily in their local street is evidence of a successful and connected local community. Opportunities therefore need to be taken in the design of the public realm to allow greater use of streets and spaces for play by all ages of young people.

This guide fully supports the vision for play set out in The Play Strategy published in 2008 by the Department for Children, Schools and Families.

The elements of the vision are:

- In every residential area there are a variety of supervised and unsupervised places for play, free of charge;
- Local neighbourhoods are, and feel like, safe and interesting places to play;
- Routes to children's play space are safe and accessible for all children and young people;
- Parks and open spaces are attractive and welcoming to children and young people, and are well maintained and well used;
- Children and young people have a clear stake in public space and their play is accepted by neighbours;
- Children and young people play in a way that respects other people and property;
- Children and young people and their families take an active role in the development of local play spaces; and
- Play spaces are attractive, welcoming, engaging and accessible for all local children and young people, including disabled children, and children from minority groups in the community.

Play can be encouraged simply by reducing road danger and the dominance of traffic on our residential streets. Homezones are one way of achieving this as is the Streets for People programme funded by Transport for London. The creation of pocket parks and community spaces is also important.

An emphasis needs to be placed on not only providing play facilities within parks and formal public spaces but also on providing incidental local play facilities which blend with and are incorporated into the design of the local public realm.

Children have great powers of imagination, so even simple, low cost measures which create interest and stimulate curiosity in the local environment, can be very beneficial to play.

"It is particularly important near housing to create spaces for children to play and for parents and carers to meet."
Urban Design Compendium

"Ultimately, it will be by integrating more playable spaces into the public realm that a more child-friendly environment can be created."
Designing and Planning for Play
CABESpace October 2008

Public Art

Public art should be considered an integral and important part of the public realm. It can create an interesting focal point, act as a landmark, animate a meaningless space and enrich an area by reflecting and celebrating the borough's diversity of cultures and religions.

Public art can be experienced in many ways: visually, aurally, through touch etc. It should stimulate curiosity and illicit comment, yet must have a relevance to and relate to peoples' everyday lives.

While being aesthetically pleasing, public art can also be functional providing something to play, walk or ride on. Children, in particular, can find great enjoyment in public art that stimulates an imaginative response.

It is important that any art installation has local relevance and residents and businesses should be invited to participate in the selection and commissioning of an artistic work. This also helps to foster a sense of ownership and pride in a piece of art and helps to ensure that the work will be maintained and remain free from vandalism. Wherever possible, local artists working in and with the community should be the first port of call.

Possible sites for public art include shopping areas, public transport interchanges, housing developments and near to civic buildings. Areas of marginal highway land, focal points, islands within traffic junctions, entry points to town centres, pocket parks and strategic locations within networks of local streets are also appropriate. In some locations art may even be placed within the 'carriageway' to support traffic calming measures.

When developing public art proposals consideration should be given to:

- Ensuring that it does not obstruct access for pedestrians, cyclists or public transport users (minimum clear footway requirements should be maintained).
- The needs of people with physical and visual impairments.
- Whether the intention of the piece is to
- provide basic urban design functions, ncluding acting as a landmark, aiding legibility and aiding wayfinding (i.e. incorporating signposting features).
- The life and permanence of the piece; can it reasonably be moved to accommodate new priorities and layouts in the future without incurring damage?
- The quality in artistic terms of any work commissioned

Of paramount importance to the success of public art is its setting and integration into the streetscene. Thought must be given to how the art relates to its environment, it's placement in relation to other items of street furniture and whether complimentary changes to the streetscene, for example contrasting paving are required.

"Public art can make a major contribution to giving a place character and identity, bringing people into and through places."
Urban Design Compendium

"We need art, in the arrangements of cities…to help explain life to us, to show us meanings, to illuminate the relationship between the life that each of us embodies and the life outside us."
Jane Jacobs. The Death and Life of Great American Cities.

Kilburn

Ashford

Wembley Park

Harlesden

Designing Out Crime

Safety and security are essential to the creation of and sustainability of successful communities. Good neighbourhoods need to be not only well designed and attractive but places where people feel safe, free from crime and the fear of crime. The careful design of our streets and spaces can help to achieve this.

Designing out crime covers a range of issues including good public transport provision and infrastructure, adequate levels of streetlighting and the creation of a sense of place. However, perhaps the best deterrent to street crime is pedestrian activity. A busy street full of people is far less threatening than a quiet, deserted back street. As such designing our public realm in a way that encourages activity is the best way to makes our streets safer places.

Safer Places – The Planning System and Crime Prevention published by the Office of the Deputy Prime Minister in 2004 provides a comprehensive guide to designing out crime and that document should be referenced in this respect.

Safer Places recognizes that "the delivery of sustainable communities requires a sound appreciation of both crime prevention and urban design." With respect to the design of the public realm Safer Places sets out the seven attributes of safer places which have emerged from in-depth research into crime prevention and urban design practice and theory.

The seven attributes are:

- Access and movement: places with well defined routes, spaces and entrances that provide for convenient movement without compromising security
- Structure: places that are structured so that different uses do not conflict
- Surveillance: places where all publicly accessible spaces are overlooked
- Ownership: places that promote a sense of ownership, respect, territorial responsibility and community
- Physical protection: places that include necessary, well designed security features
- Activity: places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times
- Management and Maintenance: places that are well designed with management and maintenance in mind, to discourage crime in the present and the future.

The seven attributes are not meant to be prescriptive but should be used as prompts to thinking about crime prevention when designing the public realm.

"Are the decisions we are making about how to design our cities making us less happy and more fearful as a result?"
Ground Control. Anna Minton 2009

Designing Out Fear of Crime

Crime in the UK is falling. The British Crime Survey established in 1982 shows crime increasing through the 1980's to a peak of 19 million crimes in 1995. 10.1 million crimes were recorded in 2007/8, a figure lower than when the survey began. However, we remain a nation with a high fear of crime. A response to this has been a proliferation of on street 'security apparatus' such as CCTV and a tendency toward 'defensible space' design, characterized by gated communities and privatized shopping malls. Britain has an estimated 4.2 million CCTV cameras, more than the combined total in the rest of Europe.

Such a design approach can however simply increase our fear of crime and encourage social isolation. Research commissioned by the joseph Rowntree Foundation, which looked at the impact of introducing security measures in a relatively low-crime neighbourhood concluded that the 'unintended consequence' of extra security was 'to raise concerns over security and safety'. Similarly, a recent study for the Scottish Office of the impact of CCTV found not only that crime actually increased after

the installation of CCTV but also that it resulted in no improvement on people's 'feelings of safety. The study also noted that a consequence of the introduction of CCTV is a reduction in what may be called 'natural surveillance' and a retreat from 'collective and individual responsibility to self-interest and a culture of fear'.

Given these findings and the negative impact that such items as CCTV can have in terms of sign clutter and visual impact, the installation of on street security measures needs to be very focused and selective and not simply installed because of public pressure but in response to a proven and significant crime problem.

4 Sustainability & Street Management

Sustainability and the Public Realm

Sustainable Materials

Managing Climate Change

Whole life planning

Reduce/re-use/recycle

Repair and Replacement

Highway Asset Management Plan

Street Cleaning

Sustainability and the Public Realm

Good urban design supports sustainability and can make a significant contribution to tackling climate change and supporting the Council's environmental initiatives such as the Carbon Management Plan.

Road transport is responsible for around 86% of domestic transport emissions, with cars accounting for approximately half of that figure. The creation of a high quality, safe and attractive public realm can encourage greater levels of walking and cycling and when forming a part of an integrated approach to land use and transport planning in urban areas can significantly reduce the need to travel.

Sustainable Materials

The use of sustainable materials and methods of construction in the delivery of the public realm is an essential part of the Council's commitment to environmental sustainability.

Materials used should always be from sustainable sources and materials such as tropical hardwoods (such as teak and mahogany) which can contribute to illegal logging and deforestation, should only be used if they are reclaimed.

Sustainability in the manufacturing and processing of materials must also be considered.

Wherever possible, materials should be sourced locally to cut down on carbon emissions arising from transportation.

The procurement process for public realm works must support sustainability, be ethical, promote equal opportunities and follow a competitive tendering process (in accordance with OJE Regulations). A key factor here is to ensure that any specification for works is carefully drafted to ensure adherence to and promotion of the Council's "green agenda"

Managing Climate Change

In response to the urgent need to address climate change, there are many emerging issues, products and initiatives relating to the design of the public realm.

For example street design needs to take into account the likelihood of increased high intensity rainfall leading to increased surface water run-off and localized flooding. The use of sustainable urban drainage systems (SUDS) can help mitigate some of these effects. Similarly, the introduction of more green space reduces the amount of urban area covered by impermeable material and encourages biodiversity.

In terms of materials, manufacturers are now producing a range of permeable surfaces, these and other products need to be researched regarding their applicability in Brent. Regardless, it needs to be recognized that the design of the public realm must respond pragmatically and reflect the need to manage the reality of climate change.

Whole Life Planning

When designing a public realm scheme consideration of the "performance" of the scheme over time must be considered.

In this respect, an emphasis should be placed on the use of high-quality materials and construction methods. This may result in higher initial purchase/construction costs but should in the longer term prove more cost effective through reduced maintenance costs and a longer life span.

Whole life planning should also include consideration of street cleansing methods in order that they are appropriate to the materials used, minimizing damage and prolonging durability.

When specifying materials consideration must be given to how the appearance of a material will change over time due to age and wear and how it will respond to common street problems such as discarded chewing gum and graffiti.

Reduce/Re-use/Recycle

To promote sustainability in street design the principle of the three "R's" should be applied.

The "less is more" approach will result in a reduced level of street furniture, for example less bollards, signs and posts.

Items of street furniture removed during the refurbishment or upgrade of a street can usually be used elsewhere and good quality paving materials should be recycled. This may require the Council to identify storage space and introduce an appropriate cataloguing system, while contractors should be instructed to remove and save materials rather than dispose of them.

Most materials can be recycled. For example granite kerbs can be redressed and re-used. Where recycling is not possible a sustainable method of disposal of redundant and damaged materials should be followed.

Repair and Replacement

Regular cleaning and maintenance can reduce the need for repairs and replacement. In addition, a well-kept environment promotes civic pride and discourages irresponsible behavior such as littering and graffiti. However, it is inevitable that over time some damage to items of street furniture, paving etc. will occur.

When viewing the streetscene the eye tends to be drawn to the visual "sore thumbs" rather than those items which blend into a perceived pattern or plan. For example, a concrete bollard placed within a line of wooden bollards will appear wrong, an area of paving flags repaired with blacktop creates disharmony. The replacement of street furniture and paving on a like for like basis is therefore essential.

This will be helped by the adoption of the limited and simple palette of standard products specified within this guide, however, where bespoke or non-standard materials have been used it will be necessary to ensure a supply of replacement products; this should be done through arrangement with the supplier and provides a safeguard against damage to the design integrity of a scheme through the use of inferior materials for subsequent repair and reinstatement as part of the maintenance process.

Highway Asset Management Plan

The Council is developing a Highways Asset Management Plan (HAMP). The HAMP sets out objectives and targets for delivery, procedures for efficient management of the asset lifecycle, and a programme of improvements, for all parts of the highways network. The HAMP covers all elements of the highway infrastructure managed by the council; from roads and footways through to streetlighting, trees and verges, ensuring that a safe, usable and sustainable network is provided for all. The HAMP should become an essential tool in ensuring the maintenance of a high quality public realm.

Street Cleaning

Regular and thorough street cleaning is essential to the maintenance of a high quality public realm. A new public realm scheme can quickly become compromised by, for example graffiti, fly posting and chewing gum deposits and unless dealt with promptly a cycle of decline and neglect can occur. The maintenance regime must therefore be responsive to and adopt methods appropriate to dealing promptly and effectively with such issues.

"There is an absolute priority to integrate transport and planning in urban areas, to reduce the need to travel.

Our streets are frequently unpleasant places to be unless you are inside a vehicle. They need to become placeswhere people can enjoy walking or gathering or sitting, in shade or sun.

Getting more people walking and cycling..can be encouraged through designing streets, squares and green spaces to create safe routes linked to public transport.

When planning and design are integrated with traffic management places can be transformed."

Hallmarks of a sustainable city
CABE 2009


Brazil

5 Materials and Construction

"Simplicity is the ultimate sophistication."
Leonardo Da Vinci

Footways

The footway exists primarily for the use and enjoyment of pedestrians, all other considerations in footway design should be treated as secondary. However, it is important to recognise that footways provide a setting for adjacent buildings and spaces, and as such their design must be considered in relation to the local architecture and predominant frontage uses

.

Clear Pedestrian Path

It is essential to ensure the passage of pedestrians along the footway is not compromised by street furniture or other obstructions. A clear pedestrian path should always be provided in accordance with the rules outlined below. The achievement of clear lines of sight along the footway is also important to reduce fear of and opportunities for crime.

The desired dimension of the clear pedestrian path relates to the level of pedestrian activity, either constantly throughout the day or at peak times. In this respect footways can be categorized into three distinct types:

Primary Pedestrian Routes - where there is heavy footfall, such as town centres, high streets, busy shopping areas and public transport nodes.

Secondary Pedestrian Routes - medium footfall, which includes local shopping frontages, areas in the vicinity of public buildings or leisure facilities, and near popular bus stops.

Tertiary Pedestrian Routes – light footfall, such as residential streets.

The desired minimum dimensions for clear pedestrian paths (excluding private forecourts) are:

Primary Routes – 3.0m
Secondary Route – 2.0m
Tertiary routes – 1.5m

Pedestrians must be considered as top of the hierarchy of road users and footways should never be narrowed to accommodate vehicular movement. Opportunities should always be taken to widen footways to achieve these dimensions.

An absolute minimum of 1.0m of clear width is acceptable where site constraints exist although the length of such constricted areas should never be more than 600mm.

Footway Design

Appropriate design, skilled execution in construction and careful maintenance of the footway are perhaps the three most important factor in achieving a high quality public realm. However, many of Brent's streets are aesthetically compromised by the use of inconsistent and inappropriate materials unsuited to the local character. The use of a wide range of materials also results in additional problems with maintenance and re-instatement.

The guide therefore promotes a uniformity of design language and the use of a limited range of footway materials appropriate for use throughout the borough to achieve high quality, simple and easily maintained footways.

Clear pedestrian path is essential

Artificial Stone Paving (ASP)
The standard material for footways is silver grey artificial stone paving (asp) with a textured finish. The standard unit size is 600x750x63 although 900x600x63 units may also be used.

Paving units should be laid perpendicular to the pedestrian flow in a traditional stagger bond with consistent mortared joint alignment.

The use of small element paving is historically inappropriate for Brent and results in footways looking too 'busy' due to the high number of paving joints. It's use should therefore be restricted to repairing areas of existing modular paving.

Patterning of the footway, using such materials as block or tegular paving, should generally be avoided. Exceptions include using blocks as an edging for tree pits and to delineate specific items of street furniture such as seating.
A non-standard paving treatment is acceptable when providing a setting for public art.

The use of tegular and block paving should generally be restricted to town centre locations.

Asphalt Surfacing
When laid carefully an asphalt footway surface can look attractive and the qualities of asphalt in terms of durability and strength should be recognized. It's use is therefore appropriate where large areas of footway need to be covered and on streets with grass verges.

Mastic asphalt is a good choice of material where basements or cellars encroach under the footway.

Tactile Paving
Guidance on the use of tactile paving is provided in the Department for Transport booklet 'Guidance on the Use of Tactile Paving Surfaces (2003).

Tactile paving is available in a number of different textures and colours which are used to provide information to blind and partially sighted people. Blister paving is the most common in application alerting people with visual impairments of the transition from footway to carriageway.

At controlled pedestrian crossing points red blister paving should be used. Charcoal grey blister paving should be provided at uncontrolled crossing points and pedestrian refuges.

In areas of particular sensitivity such as conservation areas or in town centre schemes a lighter grey blister paving possibly incorporating stainless steel details. In such cases expert advice may be sought and decisions taken to deviate from the standard approach should be carefully documented.

Corduroy paving is used to warn of specific hazards such as steps or where a footway becomes a shared surface. Corduroy paving should not be used to delineate specific items of street furniture such as bicycle stands. Where used corduroy paving should be grey in colour.


Low kerb height


Flush kerb


Grey tactile


Kerb art

Kerbs
Silver grey 'conservation kerbs' are the standard kerb unit for use throughout the borough. However, granite kerbs should be considered where budgets allow.

Kerbs should typically have an upstand of not less than 125. Kerb upstands at bus stops should be 140mm. However, a very low upstand or a flush kerb is appropraite in shared surface design.

Wherever possible radius kerbs should be used at corners avoiding the need for difficult and often untidy mitred joints.

Kerbs should be dry jointed and closely butted, with rear faces sawn to avoid the need for a mortar infill between the paving and the kerb.

Half battered kerbing is appropriate for use in shared surface schemes where some degree of tactile separation is required.

Double height kerbs may be used to prevent footway parking.

Dropped Kerbs

In the interests of improving pedestrian accessibility the installation of new dropped kerbs should be incorporated in all footway upgrade works.Dropped kerbs should be constructed with a 5mm -9mm upstand to ensure good drainage.

Footway Strengthening

Where vehicle run-over or footway parking is expected the footway can be strengthened using fibre or steel reinforced paving. The reinforced paving should be identical in appearance and size as the adjacent paving.

Footway Crossovers

Crossovers – Residential
Requests for the construction of residential footway crossovers must be considered with reference to the Council's comprehensive domestic footway crossover policy, details of which are available via the Council's website. In general however, the following design principles should apply.

Every effort should be made to ensure a consistent level of footway is maintained over the length of the crossover to avoid an undulating surface which inconveniences pedestrians.

The crossover should ideally be constructed in the same material as the footway to reinforce the primacy of the pedestrian over the footway area. Where different materials are used they should be similar in colour and shade to the predominant footway material. The cost of the crossover (to be paid for by the applicant) should include any necessary sub-base strengthening to prevent damage to the paving materials.

The ramp to the carriageway should measure between 0.5 and 1m depth from the kerb edge and have an upstand of 25mm adjacent to the carriageway. The ramp gradient should be 1:12. Where crossover construction to these dimensions leaves less than 1m of level footway behind the ramp the crossover application should be automatically refused.

Crossovers – Commercial
Crossovers for use by commerial vehicles should be designed in accordance with the principles for residential crossovers but require deeper excavation of the sub base to provide greater load bearing. Commercial crossovers should be finished in asphalt.

Utility Inspection Covers

To ensure that utility inspection covers contribute to rather than detract from the streetscene they should, where possible, be aligned with paving joints and the kerb-line.

All paving to be dressed into the inspection cover should have joints and fillets of, ideally, no more than 20mm or as narrow as any flange surrounding the ironwork permits.

Inset inspection covers are recommended for use in town centres and may be installed in other areas if paving works to upgrade the footway are carried out.

When used, the material used and paving bond (within the cover) should match those of the surrounding footway.

Inspection covers remain the property of utility companies who must be informed of any change to their alignment or changes from metal to inset designs.

Inspection cover detail

Preferred crossover design

Crossover detail

Private Forecourts

To provide a consistent footway appearance, every effort should be made to pave private forecourts in the same material as the rest of the footway. This will require negotiation with the private party to reach an agreement on construction and maintenance. To encourage such an agreement, costs associated with the paving of private forecourts should generally be borne by the Council.

Where the cost of paving over a private forecourt is prohibitive (usually due to the presence of a cellar) , care should still be taken to ensure a well designed and 'clean' interface between the public and private areas. In such circumstances it may be possible to finish the private area in a contrasting material such as asphalt.

Where required, brass or chrome studs should be used to delineate the public/ private division.

Shared Surfaces

The design of shared surfaces and Homezones seeks to give equal priority to all street users and does not adhere to the traditional separation of the footway and carriageway by level and material. By definition, shared surfaces embrace the principle of ambiguity by blurring the traditional division between pedestrians and vehicles. In design terms it defeats the object of shared surfaces to see them as opportunities to use a range of contrasting materials and paving treatments, excessive signage and bollards to continue to imply a degree of segregation between users.

As such, shared surfaces are usually characterized by the use of a single paving/surfacing material. While the type of material and construction used will depend on the likely level of vehicle loading, the use of reinforced ASP paving should be considered as the standard. In certain circumstances, block or tegular paving may be used as an alternative where standard paving is considered impractical due to high vehicle loading.

However, care should be taken to ensure the choice/colour of material does not provide a 'contrast' between vehicle and pedestrian areas. The exception to this rule is the use of ''half-battered' kerbs where some minor transition from pedestrian to vehicular areas is felt to be necessary.

Brightion - shared surface


BOOKS
RICHARD CAREMAN 3/2010

6 Street Furniture

Footway Materials

General Principles

Street Lighting

CCTV

Bollards

Guardrailing

Traffic Signals

Seating

Litter Bins and Salt Containers

Bus Shelters

Utility Cabinets

ITEM	Artificial Stone Paving
USE	The standard material for footways
COLOUR	Silver grey
FINISH	Textured
DIMENSIONS	600x750x63 or 900x600x63 paving unit
COMMENTS	Perpendicular to pedestrian flow Stagger bond Consistent joint alignment Reinforced paving should match in colour and size Small element paving should not be used 50mm unit should not be used

ITEM	Tegular Paving
USE	Town Centre locations only
COLOUR	Grey
FINISH	Textured
DIMENSIONS	Various, 60 and 80mm thickness
COMMENTS	Not Suitable In Heavily Trafficked Areas

ITEM	Brick Paving
USE	Town Centre locations only
COLOUR	Various

ITEM	Blister Paving
USE	Controlled And Uncontrolled Pedestrian Crossing Points
COLOUR	Pink or Grey/Natural
FINISH	N/A
DIMENSIONS	400x400x65
COMMENTS	Pink At Controlled Crossings, Grey At Uncontrolled Crossings. Buff Colour Should Not Be Used Stainless Steel Studs Not Recommended Due To Concerns Over Slip Hazard

ITEM	Corduroy Paving
USE	Shared Surfaces and at other Locations where tactile warning required
COLOUR	Grey
FINISH	N/A
DIMENSIONS	400x400x65

ITEM	Kerbs
TYPE	Conservation Kerb
COLOUR	Silver grey
FINISH	Textured
COMMENTS	Half battered kerbs can be used in sharedsurface treatments

ITEM	Granite Kerb
USE	Boroughwide where cost allows
COLOUR	Grey

ITEM	Double Height Kerb
USE	To prevent footway parking adjacent to green verges where site conditions allow
COLOUR	Grey

General Principles

Street furniture has a major impact on the appearance and function of a street, both in terms of the style of furniture chosen and its placement. Installing street furniture without considering it's relationship with the other components of the streetscene can lead to a cluttered an unharmonious streetscene. However, carefully and considerately specified furniture can have a very positive impact.

Colour Consistency
To ensure a consistency of approach throughout the borough, all standard items of street furniture should be treated in a Raven black, powder-coated finish or paint of the same colour. This includes lighting columns, bollards, sign poles, cycle parking stands, utility cabinets and guardrailing.

Location
Complimentary Items of street furniture should be grouped together and placed outside of the pedestrian clear path. Features including lamp columns, bollards, litter bins, guard railing and cycle parking must be located so as not to obstruct pedestrian movement along the footway or present a hazard to people with sight impairments.

Street Furniture

Bollards of varying shapes, sizes, and hues are numerous throughout the borough. There are bollards manufactured in wood, chrome, iron, concrete and plastic. There are black, white, black and white and green bollards, some with reflective properties others without. The inconsistent and overuse of bollards is a significant contributor to street clutter and a public realm that appears unplanned and random. However, advances in the design and durability of reinforced paving materials, together with rigorous enforcement of illegal parking, has reduced the need for bollards.

Bollards

Location
The use of bollards should generally be restricted to the following situations:

- 0n kerb build-outs and at road junctions to protect pedestrians from vehicles over-riding the footway;

- At the interface of public and private land, if buildings, landscaping, boundary walls or other edge treatments do not prevent vehicular access onto the private land;

- To block vehicle access where roads are closed to through traffic.

In exceptional cases bollards may be used in front of premises subject to persistent ram raiding.

The use of bollards to prevent footway or verge parking should be considered as a last resort where all other methods including reinforcement, enforcement, double height kerbs, tree planting etc. have been discounted.

Existing bollards should be removed where:

- Existing paving is replaced by strengthened paving;

- When new parking controls are introduced to prevent footway parking

Doric Bollard

Bell Bollard

'St Pancras' type bollard

Bollard incorporating signage

Type/Finish
The standard bollard is the 'Doric 'design. However the 'St Pancras' bollard type can be used where a more robust bollard is required and when signage needs to be affixed to the bollard.

Wooden bollards are appropriate in the north of the borough and for protecting grass verges but they should not be used in town centre locations.

Bell bollards can be used where there is a serious problem of overun on a corner. They should preferably be installed with a taller bollard immediately behind to help blind and partially sighted people.

Concrete bollards must not be used.

With the exception of wooden bollards, all bollards should be Raven Black.

Keep Left Signs

The provision of ‘keep left’ traffic bollards (IGP’s) at every pedestrian refuge or traffic island is not required by law as they do not generally enforce a traffic order. In fact many ‘keep left’ bollards are not strictly necessary at all as the Highway Code states that drivers should “keep to the left unless directed by a traffic sign”.

Location
Regulations relating to the provision of pedestrian crossings state that ‘keep left’ signs ‘may’ be placed on a refuge or central reservation – implying that equally they may not. It is up to the highway authority to decide. In their award winning Walworth Road scheme, the London Borough of Southwark have not provided keep left bollards on pedestrian refuges.

In the interests of reducing traffic clutter consideration should always be given to whether the provision of a keep left sign is necessary.

Type/Finish
Externally illuminated or solar powered signs are preferred to the standard internally illuminated IGP which is easily damaged and prone to vandalism.

Recommended style for Town Centres

Standard IGP

Guardrailing

Guardrailing is unsightly; it segregates pedestrians from vehicular traffic by blocking pedestrian desire lines and it's use, particularly in the form of staggered, "cattle pen crossings", reinforces an outdated hierarchy where cars have implicit priority over pedestrians. However, the much cited and awarded Kensington High Street scheme has shown that the removal of guardrail can have positive impacts in terms of both the streetscene and road safety. This is recognized in the Department for Transport's recently published Local Transport Note 2/09 – Pedestrian Guardrailing which concludes that "..there is no conclusive evidence that the inclusion of pedestrian guardrailing at any type of pedestrian crossing or junction has any statistically significant effect on the safety record.."

In line with current guidance and to support the public realm objectives the use of guardrailing in Brent should be minimized.

Location
Local Transport Note 2/09 provides an assessment framework for determining where guardrailing use is appropriate. It also provides a means for assessing whether existing guardrailing should be removed. Reference to that document is highly recommended, however as a general rule, guard railing should only be installed or retained when there is a strong safety justification. Locations where the use of guardrailing should be considered include:

'Post and Rail'

Guardrail incorporating signage

- Near the entrances to schools, parks, play areas, sport centres and other youth facilities;
- At the ends of alleyways where pedestrians, particularly children, could inadvertently walk/run into the path of vehicles;
- On streets with a speed limit set at 40mph or higher.
- Where pedestrians need to be protected from a significant change in levels.

In all cases, consideration of alternative design approaches should be given. A design which limits or reduces traffic speed may negate the need for guardrailing even at the locations given above.

Guardrailing should never be used as a means of discouraging footway parking or in single stand alone panels.

Type/Finish
Standard sections of galvanized steel guardrail should be finished in Raven Black, preferably powder-coated. 'Visirail' should used at pedestrian crossings and other sites e.g. outside schools where pedestrian visibility is important.

'Post and Rail' designs (also available as Visirail) should be considered for use in town centres, conservation areas and major public realm schemes.

Guardrail forms a barrier to pedestrian movement

Single panels of guardrail should never be used

Guardrail incorporating planting

Seating

Seating provides a valuable resting place, particularly for elderly people and those with mobility difficulties. It can also help to create a sense of place, encourage community interaction and contribute to the vitality of a street.

Location
Seating provision is particularly important at the following locations:

- Areas with significant pedestrian activity, such as town centres and transport interchanges.
- Public squares and spaces, pocket parks and in the vicinity of public buildings.
- Along footways with steep gradients.On areas of high ground with prominent local views.

Seating should ideally be positioned in a sunny location facing main street activities and where possible sheltered from wind and rain. It should be oriented to afford the widest possible view of street activity, for example, they could be placed at the back of the footway facing out towards the street, or they could be 'backless', bench seating thereby offering pedestrians a choice in how to sit. Care should be taken to avoid placing seating longitudinally on slopes or in locations where seat could be used to gain unauthorised access to adjacent properties.

Informal seating can be created using steps, low walls, spherical or bespoke bollards etc.

Type/Finish
Wooden seat materials are preferred and the type of seat chosen should be in keeping with the local character. Wooden seating must be Forestry Stewardship Council approved.

The provision of central arm rests deters anti-social behavior (including vagrancy and skateboarding) in areas where this might be a problem.

Bench seats (backless) provide for more flexible sitting arrangements and are appropriate for areas where pedestrian activity is high.






Streetlighting

Street lighting is an essential part of the streetscene. It provides a functional level of light for wayfinding and it can increase actual and perceived levels of safety and security. Lighting can also be used to emphasise character and create a sense of place during evening hours and seasonally.

It is essential that street lighting provides adequate or good illumination. Street lighting should reflect the function of the street and visibility bands may be required in areas of high pedestrian flows. Low-level pedestrian lighting must be considered in areas with medium to high pedestrian flows. On footpaths away from the road, low level overhead street lights should be specified. The placement of lighting should fulfill basic illumination requirements, but consideration should also be given to the visual impact of lighting units and columns during the day (visual impacts should be minimised) and to opportunities to highlight local features and characteristics through lighting placement and spacing.

Lighting can be attached to buildings (with the agreement of the owner) or placed at the front or back of the footway. Whichever method is chosen should be applied uniformly along a street or within a space. Light fixtures and columns should be similarly uniform in type and spacing.

Designers should give consideration in schemes to whether signage and signal heads can be incorporated on lighting columns. In relevant cases, columns must be specified to meet likely structural loads and wind pressure forces arising from the attachment of signs and equipment.

In areas where light columns need to be replaced, they should be replaced with the same design as the column unit being replaced.

Location
The layout of freestanding street columns should generally be in accordance with BS 5489 for the road type and geometry, having regard to the need to minimise the number and height of columns whilst giving sufficient useful illuminance for pedestrians and cyclists. Columns at the front of footways should be set back 450mm from the carriageway with speed limits of 30mph or lower and 650mm in streets with limits of 40mph or higher.

Light pollution should be minimised, as should invasive lighting of adjacent dwellings.

Type/Finish
The design and height of lamp columns will be determined by the character area, conservation area or town centre in which they are located. In conservation areas, lighting should be appropriate to its setting—it would not be appropriate for example to use a 'Victorian' style lighting design in an 'interwar' suburb.

Compared with conventional sodium lighting, LED lighting has significant advantages in terms of lower energy costs, reduced carbon emissions and reduced light pollution. The roll out of its use in the borough is strongly recommended.

All streetlights should be finished in Raven Black.

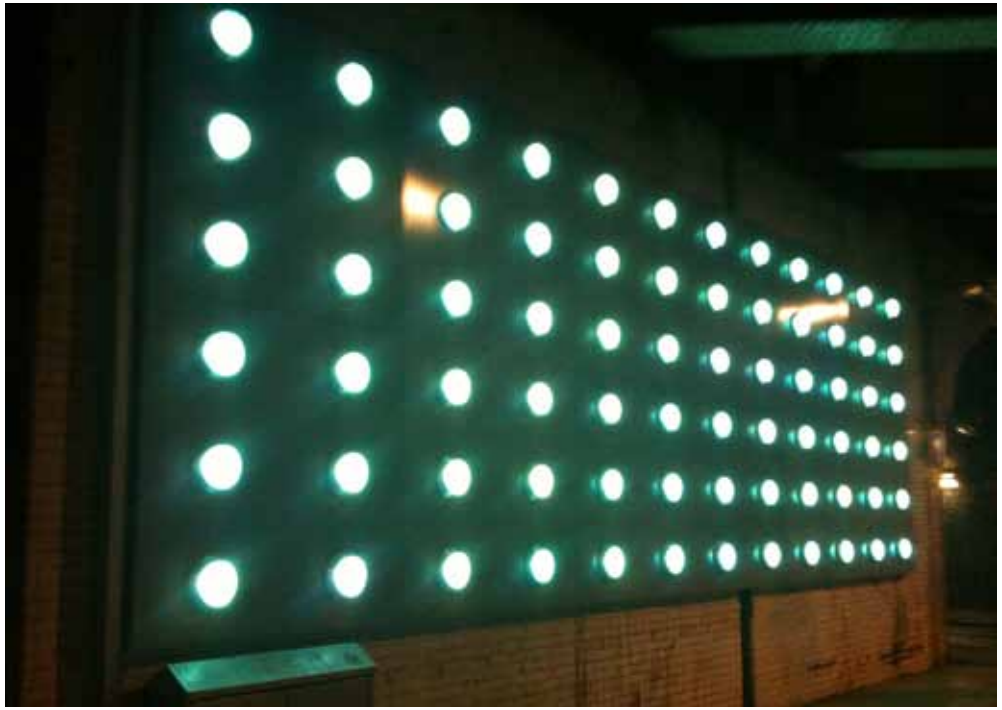
Feature and Decorative Lighting

Feature and decorative lighting is particularly effective in creating interest and atmosphere in the public realm.

Its use can range from simple uplighters to define spaces or illuminate trees to the large scale lighting of large structures such as railway arches or key buildings.

Public art features incorporating light installations add a uniqueness which is so important to the placemaking process.

However, care needs to be taken when designing feature and decorative lighting schemes and in most cases it will be necessary to engage the help of a specialist lighting designer/artist.



Bicycle Parking

To encourage and maximise potential cycle usage within the borough, sufficient and appropriate bicycle parking facilities must be provided across all parts of the borough. Cycle parking should be integrated in the public realm and enhance the streetscape without limiting pedestrian movement.

Location
In order to maximize potential usage, cycle parking should be:

- Situated in convenient locations close to identified destinations;
- Where possible, located within the carriageway, either on or protected by kerb build-outs;
- Placed in busy locations which are highly visible and well overlooked.

Where cycle stands are placed on the footway, designers must have regard to maintaining minimum pedestrian clear footway widths.

Bicycles are very vulnerable to theft and damage. Bicycle parking should not therefore be positioned in remote locations or where some degree of public surveillance is not possible.

Type
The standard cycle parking unit is the 'Sheffield' stand finished powder-coated in 'Raven Black'. A reinforced crossbar may be included. Sheffield stands are now available from specific manufacturers in recycled locally sourced steel.

Single Sheffield stands can look unbalanced, it is always better therefore to erect stands in groups of two or more and adjacent to other street furniture. Single stands or the end stands in groups must incorporate tapping rails.

Bollards designed to accommodate cycle parking maybe considered where space is limited. These must be set back a minimum of 600mm from the kerb edge, in line with 'London Cycle Design Standards' advice.

'Butterfly' or other tyre-clamping designs should never be used.

In certain locations, long-stay cycle parking may be required e.g. near transport hubs and interchanges. Long stay cycle parking should be covered and the use of cycle lockers to provide extra security should be considered together with CCTV surveillance. Where covered cycle parking is provided, the canopy structure should be designed to a high standard and compliment the local architecture and streetscene. .

Motorcycle Parking

Location
Secure motorcycle parking should always be provided in town centres, near educational establishments and close to civic/leisure centres.

Type
Physical security can be provided by a 'Sheffield' type motorcycle parking stand which should be placed on the carriageway (never the footway) in areas defined by build-outs. Where motorcycles are parked in bays at 90 degrees to the kerbline a single continuous steel rail set at 600mm height is appropriate although care must be taken to avoid placing the rail where it may pose a tripping hazard.

The use of ground anchored motorcycle parking facilities provides a very neat and safe alternative to the Sheffield style stands.

The space required for motorcycle parking should be determined by an estimate of likely demand. An area 2m by 0.8m is required for each motorcycle.

CCTV

The pros and cons of installing CCTV cameras is discussed in Section XX which recommends that CCTV should only be introduced in response to a 'proven and significant crime problem' can foster an added sense of security in the public realm. However, their use is becoming widespread and it must be recognized that free standing cameras can significantly contribute to the visual clutter of public spaces and reduce available footway width.

Location
Potential locations for cameras should be considered not only on the basis of the best 'line of sight' but also with respect to the impact of the CCTV kit on the streetscene and local architecture.

Due to advances in CCTV technology, cameras are now small enough to be fitted unobtrusively to buildings, with cables and equipment boxes hidden, or to be integrated with other street furniture such as traffic signals and lamp columns.

This approach should always be considered before implementing freestanding cameras. In some cases, it may be necessary to install for example two wall mounted cameras to cover the same area of surveillance which would be provided by one freestanding camera.

Although this is likely to result in some additional installation cost, the benefits accruing in terms of decreased visual harm, particularly in sensitive areas, such as town centres and high streets, will justify the added expense.

Type/Finish
Where there is no practical alternative to a freestanding camera, consideration should be given to mounting the camera on a column of the same style as the existing streetlighting..

CCTV columns should be finished in Raven Black.

Litter Bins/Salt Bins/Cigarette and Gum Disposal

Litter Bins
The standard design for litter bins in Brent is shown opposite although alternative styles may be appropriate in conservation areas and town centres.

When placing bins on street care should be taken not to reduce the width of the clear pedestrian path, obstruct access to adjacent property or interfere with sightlines.

Salt Bins
Salt bins are essential for maintaining the safety of carriageways and footways during winter months. They can however be unsightly and consideration should be given to adopting a stackable design allowing bins to be removed and stored efficiently when not required, Bins left out all year may become damaged, defaced or used as de facto litter bins. Salt leakage can cause damage to footways, trees and other vegetation. They should therefore be robust and durable and the siting of bins should take these considerations into account.

Cigarette and Gum Disposal
In town centres and other areas where numbers of people are likely to congregate, consideration should be given to the provision of equipment encouraging the sensible and thoughtful disposal of chewing gum and cigarette butts. This can include the use of litter bins with integrated cigarette disposal units or other stand alone designs now available from specialist manufacturers.

Recycling Facilities

Recycling bins should be of uniform design and placed in appropriate locations. They should be easily accessible and where possible placement should reduce the visual impact on the public realm.

Recycling facilities should be easy to reach, clean and attractive to encourage the recycling of materials that would otherwise end up in our landfills. Recycling bins should be situated in areas where the risk of vandalism, impact of noise and likelihood of complaints is minimal.

At the same time, the personal safety of users must be taken into account. Movement around recycling bins should maintain minimal footway clearway widths.

In certain locations, the provision of loading bays may be appropriate to allow people to access the recycling bins by car. However preference should be given to ensuring that recycling facilities are placed within easy walking distance of the sources of recycling streams.

A standard litter bin must also be provided adjacent to recycling bins to limit general waste being thrown into recycling facilities.

Utilities Cabinets

Cabinets are necessary to accommodate utility company equipment, (primarily gas, electricity and telecommunications) while traffic signals require on street control boxes.

Location
Wherever possible utility cabinets should be located at the back of footway, close to the building line. Where this is not possible a minimum 450mm clearance from kerb edge is required.

Allowance must be made for cabinet doors to be opened without obstructing the clear pedestrian path

Cabinets should be positioned so as not to obstruct vehicular or pedestrian visibility at junctions or crossings.

Consideration should be given to screening cabinets with hard or soft landscaping and every opportunity taken to locate utilities equipment underground

Type/Finish
Galvanised steel painted Raven Black. Where fly posting or graffiti is a potential problem, the cabinet may be treated with an anti-flyposting/grafitti finish.


RICHARD CARMAN '20

7 Traffic Management and Calming

Ambiguity

Street Scale and Design

Junctions

Pedestrian Facilities

Traffic Calming

Lateral Speed Reduction Measures

Vertical Speed Reduction Measures

Road Closures

20mph Zones

Ambiguity

As discussed earlier in the guide there is new approach to local street design which moves away from the tendency to over use traffic management and calming techniques in favour of a situation where the priorities and segregation of vehicle traffic and pedestrians are less defined. This will not only result in a less cluttered environment but may help to begin to change the 'culture of use' of our streets. Drivers will rely less on information provided by lines and signs, lumps and bumps, and more on eye contact and negotiation with other road users.

It is not a simply a matter of just removing traffic signs. Other measures will be needed to communicate the message to all users that the nature of a street, and consequently the way in which they should use the street, has altered. This may include lateral speed reduction techniques, more formal and informal pedestrian crossing facilities, greater use of shared surfaces, carriageway tree planting and initiatives to increase 'friction' (e.g. kerbside parking/loading).

Ambiguity is certainly not appropriate in all situations. Major roads will of course still require extensive signage, but in less heavily trafficked local streets ambiguity is a useful method of redressing the balance between drivers and other road users, whilst reducing the negative environmental impacts of vehicle traffic, i.e. all the traffic management apparatus which dominates our streetscene.

Street Scale and Design

Any proposals affecting a street must have due regard to the scale and form of the street in terms of the original proportional relationship between the buildings, the footway and the carriageway.

Unless done with sensitivity, the introduction of for example kerb build outs, traffic islands or local widening can have a very negative impact on the streetscene by failing to recognize the need to respect these relationships and to maintain a kerbline which is parallel to the building frontage.

Generally, the construction of isolated kerb build-outs should not be undertaken. However, a series of well designed build outs, which break up monotonous lines of parking, finished in materials matching the existing footway is an acceptable means of achieving significant benefits in terms of pedestrian safety and tree planting,

Kilburn Streets for People

Vertical traffic calming features such as speed humps and cushions can also be visually intrusive and their use should be minimized in favour of lateral speed reduction measures such as build outs, chicanes and shared surfaces.

"People need to think creatively about their various roles in the process of delivering streets, breaking away from standardized, prescriptive, risk-averse methods to create high quality places."
Manual for Streets

Junctions

The size and geometry of traffic junctions influences traffic speeds, driver behavior and pedestrian convenience and safety. In the past, many junctions were generally designed around the vehicular movement function with the main objective being the maximization of traffic capacity and flow. The needs of pedestrians were often considered as secondary, resulting in a lack of crossing opportunities, minimal green time given to pedestrians at signaled junctions and complicated arrangements involving splitter islands, 'sheep pens' and guardrailing designed to force pedestrians to cross a junction in a series of time consuming stages. This approach is now considered inequitable and out-dated. Junction design should now give equal importance to pedestrian and streetscape considerations.

Emphasis should be placed on tight junction geometry which can act to slow vehicle movement and focus driver concentration. Tight junction geometries also give greater priority, confidence and safety to pedestrians and cyclists.

The installation of wide and 'slip' junctions should be avoided. Where 'slip' and wide junctions exist, consideration should be given to their removal to improve street quality.

Left (or right) filter lanes, usually featuring chevron markings to separate diverging traffic streams (e.g. at roundabouts) should be avoided where possible.

Traffic islands provide useful crossing points for pedestrians and direction for drivers. The use of islands and refuges should, however, only be considered after other options have been explored.

Corner Radii
Large corner radii encourage speed and inconveniences pedestrians. Where possible, the passage of large vehicles should be accommodated within the existing geometry of the street, by for example setting back stoplines and traffic islands.

Recommended minimum corner radii are:
- lightly trafficked streets – 3m
- other streets – 6m
- industrial areas – 10m

Priority Control
Priority control is generally the default means of junction control in Brent. Where used waiting restrictions may need to be provided to ensure good inter-visibility between all users.

Priority-Free Junctions
The use of priority-free junctions in lightly trafficked residential areas is encouraged. These designs may be as simple as the omission of give-way lines or more complex, with offsets to reduce the incidence of drivers asserting any de-facto 'right of way'. Other innovative approaches to junction design are encouraged provided that their remit is to reduce road danger and give greater emphasis to preserving or increasing pedestrian priority.

Traffic Signals
Traffic signals are an increasingly common part of the streetscape and are generally installed to replace simple priority junctions, zebra crossings and other traditional traffic control measures, in order to improve traffic capacity.

Their use on routes that have significant traffic demands is generally warranted in order to reduce junction conflicts and provide a means for pedestrians to cross the road. However, recent research in for example LB Ealing has shown that traffic signal control often increases traffic congestion and that the removal of signals can result in improved traffic flow as well as benefits for pedestrians. Traffic signals can also cause drivers to pay more attention to the signals than to the presence and safety of other road users; at traffic signals green means go, sometimes regardless of other factors.

Traffic signal use should therefore be minimized in favour of other forms of junction control. Where signals are due for replacement, an assessment of alternative control options should take place. Transport for London have stated that where signals are approaching the end of their life, and where appropriate, they will consider the use of modernisation funds to assist with the removal of signals rather than pay for the replacement of the time expired equipment.

If signals are judged necessary and are to be replaced, energy efficient LED signals should be utilised.

All new and refurbished signalised junctions designed with carriageway arm widths (excluding islands) under 10m should seek to incorporate all-green pedestrian phases with sufficient time allocated to the pedestrian phase to allow pedestrians

to cross the junction diagonally. Forcing pedestrians to cross in stages in the interests of traffic capacity should always be avoided.

Mini- Roundabouts
Mini-roundabouts are often used as an alternative to traffic signals to control conflicting traffic movements. They are however less than convenient for pedestrians and cyclists, break up the traditional street alignment and require extensive signs and carriageway markings.

While individual cases need to be considered on merit, there are many examples where a less intrusive priority junction would suffice. It is also likely that the circumstances where a mini-roundabout may be considered would also respond well tell a priority-free design.

Pedestrian Facilities

Vehicle traffic acts as a barrier to pedestrian movement and unless crossing facilities are provided can lead to community severance. Where traffic flow is significant, high-quality, closely spaced formal and informal crossings should be provided as a matter of course.

All pedestrian crossings should be placed on or as near as possible to pedestrian desire lines. Where there is a perceived risk associated with crossings placed on desire lines, solutions other than moving the crossing away from the desire lines should be investigated.

Informal Crossings
The use of informal pedestrian crossings is encouraged as they do not require traffic orders and as such can be introduced without regulatory signage, markings, signals equipment, guardrailing etc. They are particularly effective in shopping streets or other locations where there are high pedestrian volumes, as pedestrians feel more empowered to be assertive when crossing the road and motorists are more likely to be prepared to “give way” to pedestrians crossing informally. In its simplest form, an informal crossing consists of a pair of traffic islands forming a pedestrian refuge. However, where traffic flow is above average, narrowing and raising of the carriageway to footway level is recommended as this gives greater emphasis to the crossing and infers a greater degree of pedestrian priority.

Pedestrian refuges should be as wide as the street geometry will allow and no less than a minimum 1.8m in width. They should be adequately lit by adjacent streetlights and where this is not the case additional illumination should be provided..

Zebra Crossings
Zebra crossings are the preferred method when providing controlled pedestrian crossing facilities. Zebra-crossings afford pedestrians greater priority compared with signaled crossings and they force drivers to look out for and negotiate with pedestrians through eye contact.

Signalised Crossings
Where used, the timing of signalised pedestrian crossings (e.g. pelican, puffin, toucan) should be set to minimize pedestrian delay as long waiting times (greater than 1 minute) can result in pedestrians becoming impatient and trying to cross the road against a green light for traffic.

Subways
Whilst subways are no longer promoted in Brent, where they exist, visibility, day lighting, and safety should be considered as part of any environmental improvement to existing subways. Where subject to public realm improvements, consideration should be given to the removal of subways and replacement with at-grade crossings.

Traffic Calming

Where possible, the use of vertical deflections should be avoided in favour of other methods of reducing motor vehicle speeds. Such measures may include 'psychological' traffic calming, carriageway width 'restrictions', removal of white lines and other markings, installing features that reduce forward visibility (such as landscaping and tree planting, tightening junction geometries, changing parking layouts to introduce 'friction' and restoring two-way operation in one-way streets.

The design of local calming schemes should seek to reduce average motor vehicle speeds to a level that permits removing the distinction between the vehicular and pedestrian uses. Opportunities should also be sought to incorporate social and play spaces into the street.

Lateral Speed Reduction Measures

There are a number of means of reducing traffic speeds through lateral measures.

Build Outs
Simply narrowing the carriageway with kerb build outs and reducing optical width and forward visibility through, for example tree planting, can be very effective. Where sightlines need to be maintained, low level planting provides a practical alternative. Where build outs are provided they should be constructed in the same paving material and bond as the adjacent footway. This will to give the appearance of a continuous uninterrupted surface rather than an intrusive add on.

Where possible, backfalls should be avoided, although it is recognized that in many cases cost considerations will preclude other methods of constructing build outs. Where backfalls are used the resulting drainage channel should follow the line of the existing kerb.

Chicanes
Chicanes represent a more complex arrangement of build outs to create a narrowed and deflected path for vehicular traffic. Chicanes can be very visually intrusive and care must be taken to ensure convenient access for emergency vehicles. However, if designed around diagonal parking arrangements and constructed in materials matching the existing footway, they can be very effective in reducing traffic speeds.

Traffic Throttles
A traffic throttle comprises parallel footway widening on both sides of a road allowing only a single line of traffic to pass through the throttle.

Width Restrictions
Width restrictions are generally used to prevent the passage of large goods vehicles through residential areas.

Parking Friction
Parked vehicles can be utilized in a design to reduce the available carriageway width, effectively reducing vehicle speeds.

Rumble Strips
Rumble strips, comprising a series of raised ribs placed across the carriageway are a simple and fairly non-intrusive means of controlling vehicle speeds. They can however result in increased noise levels and their use in residential streets is not therefore recommended.

Vertical Speed Reduction Measures

Vertical speed reduction measures such as tables and humps can be used to calm residential streets, although they should be used sparingly and only when lateral speed reduction measures are considered impractical.

Entry Treatments
Entry treatments are generally provided on the side road of a traffic junction to give increased priority and convenience to pedestrians. The raised portion of the entry treatment should be designed to emphasise the priority given to pedestrians and surfaced using a material which matches closely, rather than contrasts with, the adjacent footway material. This would preferably be re-inforced paving slabs constructed on

Speed Tables
Speed tables should be constructed so the flat top of the table is flush with adjacent kerbs. Ramp gradients should not exceed 1:15. The table and ramps should be surfaced in hot rolled asphalt unless the table is also a defined pedestrian crossing point. In such cases, the ramps of the table may be constructed in grey block paving and the flat section of the table finished in a coloured asphalt or plain asphalt with a contrasting buff aggregate (chippings).

Speed Humps and Cushions
Speed humps and cushions visually impact on the quality of the public realm and can hinder cycling. Their use should therefore be minimized.

Sinusoidal humps offer the best fit between the alternative choices of conventional full width humps and cushions. They can reduce the noise problems of sharp acceleration and deceleration associated with other designs and are more comfortable for use by cyclists.

Conventionally ramped full-width humps should not be implemented or replaced like for like unless a smooth transition between the street surface and ramp can be achieved.

The distance between sinusoidal humps should not exceed 40m. This is in order to deliver consistent, evened-out speeds of 20mph or less.

Hump height should not exceed 75mm (+/- 10mm)

Speed cushions have been rendered less effective by the introduction of wider private vehicles. At present, drivers tend to aim to straddle the cushions, causing problems for oncoming drivers and cyclists, particularly where a three cushion design has been implemented. The use of speed cushions is not therefore recommended.

Road Closures

Where introduced, road closures should fit seamlessly into the streetscape. Emergency access should be provided by lockable or retractable bollards rather than the more 'traditional' metal fire gates. The path for emergency vehicles should not be delineated by coloured surfacing but should be paved in materials to match the adjacent footway.

20mph Zones

At present there is considerable debate, particularly within London, on the issue of 20mph zones and whether the existing piecemeal approach to their introduction should be replaced with a default 20mph limit on all residential roads.

Current DfT guidance states that if the mean speed on a road is 24mph or lower, highways authorities can set a 20mph speed limit and enforce it using signage alone. However, if speeds are higher than this threshold, local authorities are expected to introduce traffic calming measures to physically enforce the 20mph limit. The guidance goes on to state that

"Physical traffic calming measures, especially road humps, are often a source of complaint for road users and residents, often around the noise and vibration caused when vehicles travel over them. The London Ambulance Service has reported that humps can impede ambulance response times and patient comfort."

There are already a number of 20mph zones within Brent, the design of which tends to rely on vertical calming measures such as humps and tables.

In the light of the above guidance and in keeping with the approach promoted in this guide the implementation of further 20mph zones within Brent should look to employ more horizontal and psychological calming measures together with design ambiguity to reduce speeds.

The enforcement of 20mph zones is currently the responsibility of the Police who are reluctant to divert resources to such enforcement where 20mph zones are not 'self enforcing' through physical measures. However, the trialling of the new technology around 'average speed cameras' offers a promising new option which would effectively negate the need for any physical calming measures.

A default 20mph limit on residential roads within the borough would have major benefits in terms of reduced sign clutter and improved public realm and would be a major step forward in changing the 'culture of use' of our streets

8 Signs and Markings

“There is no fundamental need to provide traffic signs or markings.”
Traffic Management and Streetscape. Local Transport Note 1/08
Department for Transport

“The principles of good traffic management are in line with good streetscape design – neither is helped by over-provision and clutter.”
Traffic Management and Streetscape. Local Transport Note 1/08
Department for Transport

Reducing Street Clutter

Traffic signs, poles and carriageway markings have a significant impact on the appearance of the streetscene;by definition they are the biggest culprit in terms of street clutter. Yet many signs and lines are simply redundant or not needed.

Traffic sign proliferation generally results from a failure to remove obsolete signage, an over-cautious, ‘belt and braces’ approach to new signage - where every conceivable sign is provided ‘just in case’ - or the erection of unnecessary signs.

A failure of planning and dialogue between council officers may also be responsible for the not uncommon sight of numerous signs, in various sizes, hanging precariously from a single lamp column or post. Quite often it is obvious that such signs are no longer correctly aligned or pointing in their original intended direction.

Conversely, there are many examples around the borough of cases where two signs could share the same pole but are erected separately.

Decluttering, which is cheap to implement, can achieve substantial improvements to the streetscene. Rather than simply replacing damaged signs or bollards the question of whether they are actually needed at all needs to be asked.

Street Clutter Audits
Street clutter would be significantly reduced if regular street clutter audits were carried out throughout the borough, to identify existing features to be retained, removed, rationalized or re-provided. Consideration should therefore be given to funding such action as part of the Council’s maintenance regime.

New Schemes

The starting point in scheme design should be to ask the question 'Are any signs needed at all?' Time should be taken at the outset to examine road sign regulations and standards to determine how signs can be minimized both in terms of number and size. However, each situation is unique and a level of professional judgement is required to produce the best signing solution.

There are now good examples of effective designs which manage traffic and promote road safety without the need for traffic regulation orders and associated signing.

Carriageway Markings

Excessive lining and markings can have a significant affect upon the public realm. Street marking strategies should reflect the streetscape benefits of removing or omitting certain markings in terms of adjusting driver behaviour and reassigning street space to other uses.

Whilst legally required road markings must be provided at all times, their use should be kept to an operational and legal minimum.

Centrelines
On some lightly trafficked roads centerlines can be omitted. This is in keeping with the overall design approach to create ambiguity and should contribute towards lower vehicle speeds as drivers will exercise more caution.

"Designers are expected to use their professional judgement when designing schemes, and should not be over-reliant on guidance."
Traffic Management and Streetscape. Department for Transport

Central Hatching
Central hatchmarkings should only be used where there is a clear safety benefit, a single centerline marking is preferred. In many cases the presence of central hatching highlights an opportunity to provide a central reservation which may be used for tree planting and cycle parking.

Lining on Paving
Carriageway markings laid on the footway is both a contradiction in terms and a certainty to disfigure well laid paving. Markings laid across paving should always be avoided.

Anti-Skid and Coloured Surfacing
The widespread use of coloured road surfacing can create a jarring visual impression at odds with the desire to create a simple uncluttered public realm. However, there is no legal requirement to apply coloured surfacing to denote the various uses of the highway, e.g green for bicycles, red for buses and buff for calming features such as speed tables. And its use should be minimized.

Where used, it is recommended that anti-skid surfacing should be similar in colour to the general road surface. Many companies now produce anti-skid surfacing in ranges of grey. For example, by using Guyana bauxite (a dark grey material) it is possible to meet a skid resistance of 70 PSV (polished stone value) considered satisfactory by the Highways Agency for 'demanding' locations and, at the same time, have a surface that is similar in colour to a normal asphalt carriageway.

As an alternative, asphalt with coloured chippings is recommended where some degree of colouration is required.

Within bus lanes it is the policy of Transport for London to use a pigmented thin surface course in Venetian Red.

The use of green surfacing to denote cycle lanes is not recommended.

Maintenance
Poorly maintained road markings are unsightly. Every effort should be made to refurbish damaged or worn markings, however, it should be noted that a build up of thermoplastic can result in drainage problems. In such cases refurbishment should include the removal of existing markings before re-lining.

Pedestrian Signage

High quality pedestrian signage is important for increasing the attractiveness and practicability of walking to places. Signs that are inconsistent, difficult to use or vandalised work against this and reduced the quality of the public realm. To ensure pedestrian signage helps improve the quality of the public realm, pedestrian signage should generally be restricted to the following destinations:

- Public Transport Facilities
- Civic/Council Buildings and Libraries
- Leisure Centres
- Major Sports Venues
- Tourist Information Centres
- Recognised Tourist Attractions
- Public Footpaths
- Parks and Open Space
- Public Toilets

Signing individual places of worship is not considered appropriate as it could lead to a significant increase in sign clutter.

While individual 'one off' pedestrian signs may be acceptable in certain circumstances, pedestrian signage should generally be implemented as part of an area-wide scheme. This provides an overall consistency of design and helps to ensure that signs follow through to destinations.

In all cases signage should be kept to the minimum required to provide a coherent and legible source of information and where possible directions to a number of destinations should be incorporated onto the same post/ sign.

Within town centres bespoke signage systems can offer a means of providing both a comprehensive and attractive information source.

Wayfinding / Information Boards

Information boards are important pedestrian wayfinding devices. Boards should be provided within town centres and at major transport facilities.

Sign boards can include the following:

- Local street maps (maps must be tactile) and directional information to key destinations;
- Detailed local information;
- Audio facilities and braille for people with visual impairments;
- Symbols and pictorial information to support written directions.
- Distance information given in time.

As part of the 'Legible london' initiative a series of bespoke wayfinding 'monoliths' are proposed for the Wembley area.

Vehicular Traffic Signs

Vehicular traffic signs and poles are an essential component of the public realm, yet they can often detract from its appearance, particularly when their number, location and height are not given due consideration.
The Traffic Signs and General Directions 2002 (TSRGD) detail all the prescribed traffic signs and road markings applicable in the UK. The Traffic Signs Manual provides further advice on the application of those signs and markings.
It should be noted that these documents give a degree of flexibility in sign usage and size.

Grey backing boards should be used where more than one sign is to erected at the same location.

Yellow backing boards are by nature very visually intrusive. They should be used sparingly

Street Nameplates

Street nameplates are an important wayfinding measure and help add to a sense of place.

Nameplates should be placed at the entrance to streets and at junctions with other streets or intersections with important pedestrian routes and at important spaces, such as squares or parks. They should also be placed at the end of culs-de-sac.

Nameplates should be placed where drivers, pedestrians and cyclists can easily read them. Low level nameplates can easily be obscured by parked vehicles, accordingly opportunities should be taken to mount them on the side or corners of buildings at first floor height. Where circumstances dictate, freestanding nameplates should be placed at the back of the footway, directly adjacent to the property boundary.

Nameplates should be designed according to Council standards. For conservation areas and areas where building stock is predominately pre-first World War, pressed or cast metal nameplates should be used. These signs should feature a white background and black capital lettering. In other areas, nameplates can be manufactured from recycled plastic.

Street nameplates should include 'LONDON BOROUGH OF BRENT' and the first part of the street postcode in red lettering. In the interests of street clutter nameplates can also include additional information such as the no through road sign, 20mph zone, homezone etc.

Freestanding nameplates should generally be supported by wooden or recycled polycarbonate posts finished in Raven Black.

Self Adhesive Signs

Self adhesive signs, wrapped around lamp columns and posts are unsightly and their use should be avoided.

Mounting Signs

Careful consideration needs to be given to the size of signs, the means by which they are to be mounted, and crucially the relationship between the two.

Where possible opportunities should be taken to mount signs on walls or on existing posts rather than provide new posts.

To ensure a clear pedestrian path, the minimum number of sign poles should be used. Where a single post is used with a cantilevered sign, the post should be located at the kerb side of the footway. Sometimes, depending primarily on the size of the sign, it may be more appropriate to use two placed at the front and back of the footway.

Poles extending above the top edge of the sign do not look correct and should be avoided by cutting down the length of the pole.Similarly, small signs mounted on long poles appear unbalanced. In such cases a larger sign size may be preferable.

The backs of signs are visually unattractive and where possible, particularly with large signs, tree planting can be used to screen the back of the sign.

The back of signs should be finished in Raven Black, as should all poles and brackets.

Sign faces should be finished in an anti-graffiti overlay.

Signs on the footway should be located with a minimum 450mm clearance between the kerb edge and any part of the sign.

Signs on the footway should provide a minimum 2.1 height clearance

9 Parking

Parking Demand

Controlled Parking Zones

Restricted Parking Zones

On Street Parking Layouts

Footway Parking

Hardstandings and Crossovers

Electric Vehicle Charging Points

Parking Demand

Parking is a major feature of the streetscape and its layout can either contribute to or detract from the public realm. Successfully addressing the parking demands within a street and using parking layouts imaginatively will considerably alter and positively add to the experience of the public realm.

Most streets in Brent were designed and built at a time when motor vehicle use was much lower than now and when on street parking was virtually non-existent. The demand for on-street parking can therefore be seen as a fairly recent phenomenon, putting pressure on a street network which was not designed for this purpose.

It should also be noted that Brent has the third lowest level of car ownership of all the Outer London Boroughs with around 37% households in Brent not having access to a car. As such, while street design must seek to accommodate parked vehicles, pressure for parking should not override urban design considerations and the need to provide a high quality public realm for all households, whether car-owning or otherwise. In urban design terms there is a need to reduce the dominance of both moving and parked motor vehicles.

Controlled Parking Zones

Much of the borough is covered by Controlled Parking Zones (CPZ's) which are effective in managing parking where demand exceeds supply. In terms of the public realm this provides benefits in rationalizing parking and reducing it's visual impact, preventing obstructive parking and maintaining clear pedestrian routes and sightlines. These benefits do tend however come at the cost of increased street clutter due to the attendant signage, carriageway markings and ticket machines which support the CPZ.

There are however, are a number of ways of reducing the impact of controlled zone signage.

Firstly, signage should be kept to the minimum prescribed by the regulations both in terms of number and size. Yellow lines should generally be 50mm in width, although wider 75mm lines may be used where an uneven road surface would make it difficult to lay a 50mm line neatly. 'Primrose' should be the standard colour for lines. The provision of new sign posts should be kept to a minimum by mounting CPZ timeplates on existing posts, lamp columns and private walls.

Timeplates mounted on short posts positioned at the back of footway have been trialled successfully in the Mapesbury area and are in use extensively in neighbouring boroughs. This approach should be considered the norm for residential streets in Brent.

The placement of CPZ ticket machines or any street furniture associated with the security of the machine should not compromise the 1.8m clear pedestrian path. In the interest of sustainability, solar powered machines are recommended.

Restricted Parking Zones

Unlike a CPZ, a Restricted Parking Zone (RPZ) only requires signage on the zone periphery and within the zone only places where parking or loading is permitted are marked; i.e. individual timeplates and yellow lines are not required to give effect to the parking restrictions in force.

The primary advantage of an RPZ is therefore a very significant reduction in street clutter. RPZ's also overcome the problem of applying yellow lines to uneven surfaces such as granite setts. RPZ's also achieve substantial savings in implementation and maintenance costs when compared with the traditional CPZ scheme. It has been suggested that the costs associated with an RPZ are about 20% of the cost of a CPZ scheme.

There remain concerns regarding the level of public understanding and compliance with RPZ restrictions and a view that RPZ's may lead to higher levels of illegal and obstructive parking as well as more legal challenges where PCN's have been issued. It could be argued however, that an understanding of and compliance with CPZ's was probably poor when they were first introduced. Likewise, it should be remembered that the concept of traffic calming was much pillioried when first championed in the 1980's. Yet the use of CPZ's and traffic calming are now common practice.

It takes time for the public to become accustomed to and assimilate new concepts and methods and because parking contraventions result in fines, the introduction of RPZ's is likely to be controversial at least initially, yet improved understanding and compliance can occur over time.

Given the substantial public realm benefits resulting from RPZ's their introduction in Brent should be considered at least on a trial basis in areas of particular sensitivity such as Conservation Areas.

On-Street Parking Layouts

The layout of on street parking can have a significant impact on the function and appearance of a street. Parking provides a buffer between pedestrians and vehicles and adds activity to a street. By narrowing the carriageway width available for moving traffic, parking can also act as a form of traffic calming. However, parked vehicles

can dominate the streetscene and compromise local character and can represent a danger to pedestrians if adequate crossing points with clear visibility are not provided at intervals along a street. Unauthorised footway parking can cause a great inconvenience to pedestrians particularly people with mobility difficulties, for example wheelchair users and parents with buggies.

Parallel Parking

Parallel parking is the most common on-street parking arrangement in Brent and in most cases it is likely to be the most space efficient arrangement. However, in a street of average width, unbroken lines of parallel parking on both sides of the road tend to give the appearance of a monotonous and anonymous streetscene dominated by parked vehicles. This is particularly the case in long, fairly straight streets which do not have some mature trees present.In such cases, lines of parallel parking should be broken up with footway build-outs into lengths no greater than that required to accommodate 5 parked cars, approximately 30 metres. The build outs should always be surfaced in the same material as the footway and may be used to provide crossing points for pedestrians or to accommodate tree planting.

The width of the build-outs and parking bays should be 2.0 metres.

Angled Parking

An angled (or chevron) parking layout is an alternative to parallel parking and may provide the most potential to achieve public realm and traffic calming benefits. It is particularly suited to 'homezone' or shared surface treatments.A mixture of angled and parallel parking adds visual interest and variety to the streetscene and when laid out correctly angled parking can be used to create 'chicanes' encouraging slower vehicle speeds

Footway Parking

In London, footway parking is generally prohibited and the Council's parking enforcement team is responsible for prosecuting footway parking offences. However, in circumstances where road width is severely restricted, it may be necessary to allow some footway parking in order to ensure unimpeded access for emergency vehicles. Parking may be accomodated fully or where possible only partially on the footway. A list of streets in Brent where footway parking is allowed is given on the Council's website. Where an exemption allowing footway parking is in place, footway strengthening may be required. Signage associated with footway parking exemptions should be discrete and kept to a minimum. The integration of signage with any bollards used to give effect to the parking exemption is effective in this respect.

Hardstandings

Hardstandings (or front threshold parking) are highly undesirable in urban design terms as they tend to seriously impact on the overall appearance of a street. Views along the street become disjointed with buildings obscured by vehicles parked up against the building line in what were previously 'green' front gardens.

The hard surfacing of front gardens is also unsustainable in terms of ground water drainage and the loss of habitat for wildlife. In addition the construction of the vehicle crossover providing access to the hardstanding achieves a private benefit at the expense of public on street parking space.

For these reasons the Council has introduced new guidelines for determining applications for crossover installation.

Electric Vehicle Charging

The use of electric vehicles should be encouraged through the rolling out of a series of on-street electric charging points throughout the borough. However, 'kit' associated with charging points must be sensitive to the street scene.

10 Trees and Planting

The Benefits of Trees

Tree Species and Location

Tree Planting

Tree Pits and Surrounds

Tree Grilles

Carriageway Planting

Tree Removal

Private Land

Green Verges

Incidental Shrub Planting

Planters and Hanging Baskets

Highway Marginal Land and Pocket Parks

The Benefits Of Trees

Street trees are invaluable in creating an attractive and healthy environment. They provide shade, a habitat for wildlife and contribute to a sense of place. Trees are beneficial to air quality as they filter dust and pollutants in the air and convert carbon dioxide into oxygen.

Trees can act as both a visual and an acoustic barrier, softening the hard edges of the built form, screening residential properties from road traffic and absorbing traffic noise.

Trees are good for us; the positive contribution of trees in improving the quality of life and providing benefits in terms of psychological and physical health are well documented. Put simply trees help to reduce the stress of living in complex urban environments.

Trees may also become local landmarks in their own right. The ‘Wembley Elm’ in Oakington Manor Drive has been a focal point for people visiting Wembley Stadium since the 1900’s. It is the only tree in North West London listed as ‘great’ in the Time Out publication: Great Trees of London.

Tree Species and Location.

While the Council's in-house landscape architecture and arboricultural teams should be consulted for detailed advice on appropriate tree species and planting, some important factors that need to be considered when identifying locations for new trees and managing existing trees are given below.

Tree planting should respect the need to ensure a clear pedestrian path. However, it is accepted that the rigid application of a 1.5m minimum clear path may make tree planting difficult in certain parts of the borough. Likewise, the 1.5m standard may not be achieved in many existing streets, particularly in the densely developed south of the borough, due to the presence of existing trees . In such circumstances, and given the multitude of benefits arising from tree planting, designers should use professional judgment to make a balanced decision on the appropriateness of tree planting.

Where existing trees limit footway width to less than 1.5m consideration may be given to the provision of local widening of the footway. While this action may result in some loss of parking, it is preferable to losing a healthy mature tree.

Care should be taken to ensure that tree planting does not compromise pedestrian sightlines at crossing points or junctions. Trees may however be used to limit the forward visibility for drivers (see carriageway planting below)

Trees should be planted as far from building frontages as practicable but not close enough to the kerb edge that high-sided vehicles could damage the tree; this is a particular concern on bus routes. In such circumstances, a tree species offering a high canopy should be considered.

In general, semi-mature trees are most appropriate for planting in urban areas. The size and type of tree should be specified with regard to the scale and form of the street or space within which they will be planted. In a formal terraced street, in for example the Kilburn area, an evenly spaced line of same species trees would complement the street layout and architecture. In the north of the borough a less rigid

approach, combining different species and irregular planting layouts, may be more appropriate.

It must be recognised that the urban street environment is harsh. Poor air quality, potential damage to tree roots due to excavations, and an increased risk of disease require the selection of a tree species, such as Limes and Planes, which will have some tolerance to such conditions. Limes and Planes are however examples of large growing tree species which are more likely when mature to lead to concerns in relation to building subsidence particularly when planted close to the building line. In these circumstances alternative species of medium size trees such as Birch and Maple should be considered along with smaller growing, shorter-lived trees such as Cherry, Rowan and Ornamental Apple. Where there are known local subsidence problems 'small' tree species such as Snowy Mespilus, Photinia, and winter flowering Cherry would be appropriate.

While tree planting should complement local architectural styles, care should be taken to avoid obstructing important sightlines, vistas or local views.

Tree Planting

The extent of underground services and utilities equipment can often make tree planting in specific locations impossible. What looks good on plan is impossible to achieve on site. Trial pits should therefore, always be dug to assess the suitability of proposed tree locations.

Where utilities equipment presents a problem, care needs to be taken to ensure that a formal tree planting proposal does not evolve into an incoherent 'plant where we can' approach. As such, following a trial pit assessment, the tree plan should be revisited to identify alternative locations which support the integrity of the original proposal.

It is essential to ensure before planting that the existing soil and sub-soil layers will allow the tree to establish itself and accommodate root growth outside the confines of a tree pit. A free draining and aerobic growing medium is essential in this respect.

Tree Pits and Surrounds

The precise specification for the construction of tree pits will vary according to site conditions and constraints. The Council's tree officer should be contacted for detailed advice. Generally however, where trees are to be planted in paved areas the tree pit should have minimum dimensions of 1500x1500x800mm depth. Where trees are to be planted within existing grassed areas a 1000x1000x800mm tree pit would usually be sufficient.

In areas of high or average pedestrian activity the surface of tree pits should be formed by either a permeable layer of buff coloured, resin bonded gravel or self binding gravel such as "hoggin". Where pedestrian flows are low, tree pits may be finished with soil.

Bonded gravel should be laid flush with the footway and the base of the tree. There should be no upstand to the edge of the pit.

Providing a shallow channel around the tree to allow for future trunk expansion is not considered good practice as it acts as a litter trap. Expanding metal collars should be used in this respect.

Watering tubes, where provided, should be black in colour.

Tree Grilles

Metal tree grilles are costly and difficult to maintain effectively. Their use is not recommended.

Carriageway Planting

Opportunities to locate new tree planting in the area of the existing carriageway should be considered. This approach has a number of important benefits. Existing footway width is maintained and trees

are located further away from the building line, reducing concerns regarding root damage to the foundations of buildings. Carriageway tree planting can also influence traffic speeds by reducing both the physical and optical width of the carriageway.

The standard approach to accommodating trees in the carriageway is through the use of kerb build outs. See illustration below.

There are also many examples of freestanding trees being successfully accommodated within the carriageway e.g. Highgate Village. While such an approach will be limited in application, the use of freestanding trees should be considered in specific areas and are entirely appropriate when used as part of a shared surface scheme (see section xx)

Tree Removal

It is not uncommon for members of the public may to become concerned at the potential for tree roots to cause structural damage to nearby properties. Such concerns are often unfounded, and the removal of existing trees should only be undertaken where there is real evidence of a problem, not simply to appease local residents.

With new trees such concerns may be overcome by selecting an appropriate species of tree (with slow root growth, requiring low levels of water) and constructing tree pits to limit lateral root growth – root deflectors can be used in this respect.

Despite their value, it may be necessary to remove trees from the highway from time to time because they are dead, dying or dangerous. The Council acts on the technical advice of qualified Arboricultural officers. The removal of highly visible trees is always an emotive issue and appropriate notification and information is made

available to residents and the public when any steps to remove such a tree are taken,

Where the problems and likely future maintenance costs are so great that appropriate pruning cannot remedy the situation, trees will be removed and replaced with a more suitable species. Trees may also be removed which are over mature and require annual or bi-annual pruning or have a reduced life expectancy. The phased removal and replacement of unsuitable trees will produce a more sustainable tree population that is diverse in age and species. This will provide short and long term benefits for residents as nuisance issues and maintenance costs will be reduced, allowing resources to be used for other improvements to the local environment.

Tree roots can sometimes cause damage to the footways, particularly in the case of older more mature trees. This should not however result in the immediate removal of the tree. Where paving slabs are disturbed and cannot safely the area may be ramped over with asphalt to provide a safe walking surface. Where room exists, tree pits can be extended to accommodate surface roots.

Private Land

Trees located on private land will still have a significant impact on the appearance of a street. As such, measures need to be taken to encourage the retention and planting of trees on private land; this may include the application and enforcement

of tree preservation orders, working with the community to plant trees and providing information about species and maintenance.

Green Verges

Grass verges are prevalent in the north of the borough and their care and retention is integral to maintaining the integrity of the original street design in these areas.

Encroachment onto grass verges by parked vehicles should be prevented, preferably through enforcement, although physical measures may be needed.

Generally, bollards have been used in Brent as the standard physical measure to prevent parking on verges. Wooden bollards (see section xxx) should be used for this purpose. However, as bollards are easily damaged, require long term maintenance and make mowing of the grass verge more problematic, the use of double height kerbs is a useful alternative. While the initial cost outlay of providing kerbs will exceed that of bollards, savings in longer term maintainance costs will accrue and mowing will be made easier. In addition double height kerbs are likely to be much more effective in preventing footway parking and their use, unlike bollards, does not add to street clutter.

Care must of course be taken to ensure that double-height kerbs do not pose a risk or impediment to people with visual or mobility difficulties, however this is not generally the case when used adjacent to grass verges. Green verges can also incorporate low growing (below 600mm) hardy pollution tolerant evergreen shrubs and or groundcover. Shrubs are particularly appropriate in shaded areas where grass is difficult to grow.

Incidental Shrub Planting

Areas of general planting can be used to improve the appearance of highway marginal land and other similar areas. Shrub planting enhances the public realm by breaking up the monotony of hard landscape and the built form, and by adding colour, smell, texture and visual interest. They can also provide a natural barrier to access where required, add to the borough's biodiversity and provide a form of sustainable urban drainage with water run-off reduced.

Opportunities may be identified for shrub (and hedge) planting provided that existing pedestrian desire lines and footways will not be obstructed unless a defensive barrier is the intention of the planting. Robust species should be chosen for ground planting. Less robust species may be planted where planting areas are protected by walls or are raised beds, although the use of the latter must be minimised to reduce the requirement for irrigation and maintenance.

Planters

Planters generally require fairly high levels of maintenance and long term watering/irrigation. Where regular maintenance is not forthcoming they can become unsightly and neglected. In such circumstances they may also become treated as de facto litter bins. In situ brick planters can easily become damaged by root action, water etc. The use of planters is not therefore generally recommended. However, they may be appropriate in cases where there is a genuine commitment from residents or businesses to help with care and maintenance. If planters are used, care must be taken to ensure that the type and style of planters is complimentary to and in keeping with the local public realm.

Where planters are used plant species selected should be robust, pollution tolerant and require minimum maintenance.

Hanging Baskets

Hanging baskets can provide much needed colour in our predominantly grey urban environment. They do however require high levels of maintenance (a hanging basket full of dead plants is a very potent symbol of neglect) and can contribute to street clutter. The use of hanging baskets should therefore generally be limited to local town centres

Highway Marginal Land and Pocket Parks

Every opportunity should be taken to use highway marginal land and other small areas of vacant or unused space for the benefit of the local community in the form of pocket parks/spaces, small flower gardens, or seating areas.

While such spaces may be too small for physical activities, they can provide greenery, a place to sit outdoors, and even play facilities for children. To give added interest, they may be created around a monument, historic marker or art project.

Local people should be engaged in the development and design of community spaces and they may be given responsibility for the management and maintenance of such spaces which will encourage a sense of ownership.

To discourage anti-social behaviour, most of the park should be highly visible from the street and it may be designed to be fenced and locked when not in use. All spaces should ideally include at least one tree to provide shade.

Litter bins should always be provided and other elements such as community noticeboards, tree uplighters, incidental play facilities and planting should also be considered.

11 Putting It Into Practice

Design Examples

Design Example 1

1. Removal of unnecessary central reservations and guard rails creates more space to widen the footways on either side of the road.

2. Pedestrain crossing with blister paving and back-lit bollards for safe crossing.

3. High specification of dropkerb and blister paving.

4. The removal of the roundabout and the combination of signage and lighting removes street clutter, creating a more attractive and unobstructed streetscape.

5. A larger public realm means that much needed bicycle stands and seating can be introduced onto the newly reclaimed footway.

6. Unnecessary mini-roundabouts should be replaced with simple T-junctions; this creates larger and safer footways for pedestrians, removes the need for large quantities of sign posts and guard railing, creates a visually more attractive streetscape and also has the effect of slowing traffic.

7. Re-paving footways with a higher specification of concrete slab, ie. fibre reinforced.

1. Re-paving footways with a higher specification of concrete slab, ie. firbre reinforced.

2. Removal of graffiti from walls.

3. Combinign posts and signs to clear clutter; here a lamp-post also serves as the post for a speed restriction and parking restriction sign.

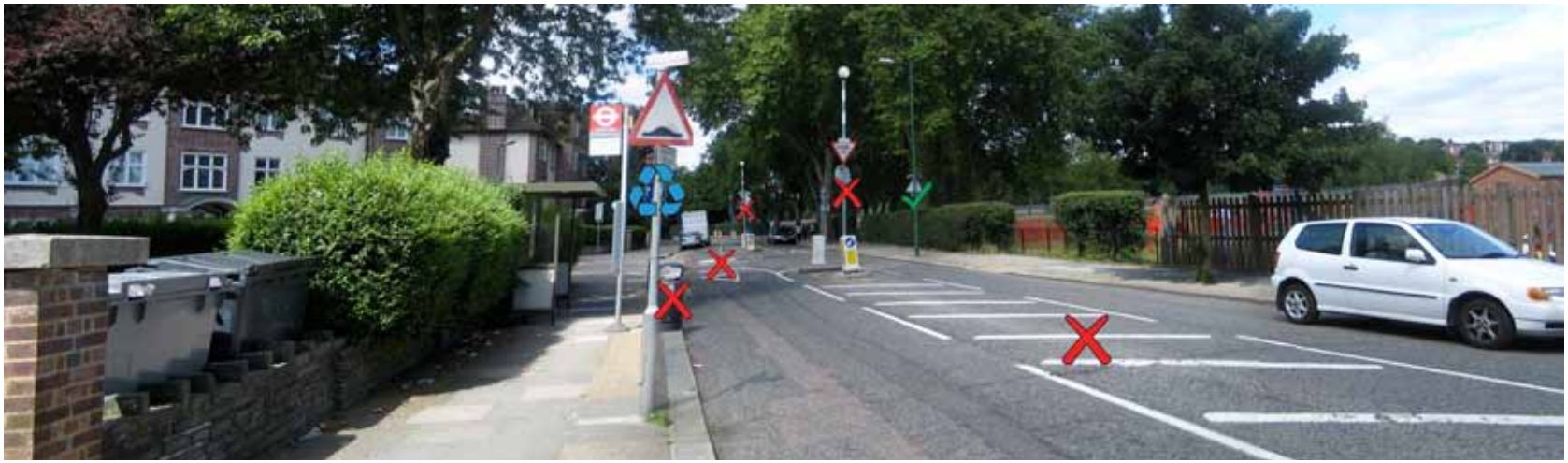
4. Unnecessarily long footway crossovers are split and refined; redefining the pedestrian realm.

5. Footway build-outs with street trees serve mulitiple functions; they split up an otherwise continuous line of parking on either side of the road with two rows of adjacent trees creating a more attractive environment; the footway build-outs also serve the purpose of narrowing the appearance of the road, therefore making drivers more cautious and approach at lower speeds.

6. Resurfacing of roads, creates safer driving evironments and a more pleasant visual streetscape.

7. Unnecessary street clutter is cleearer by the combination of multiple signs and the removal of disused sign-posts.

Design Example 3



1. Redesigning the edge condition of the pedestrian realm.
2. Re-paving footways with a higher speicification of concrete slab.
3. Locating necessary street furniture such as bus stop signage and rubbish bins in less obstrcutive positions on the footway.
4. Unnecessary mini-roundabouts are widespread across Brent; replacing them simple T-junctions creates larger and asafer footways for pedestrians, removes the need for large quantities of sign posts for ‘give way’ and roundabout signs, creates a visually more attractive streetscape and also has the effect of slowing down traffic/
5. The removal ofthe roundabout removes the need for multiple signage.
6. Replacing wide chevron road markings with centre lines means the footways can be enlargened on either side of the road.
7. Resurfacing of roads; safer driving environments and a more pleasant visual streetscape.

References

Streetscape Guidance 2010
A guide to better London Streets
Mayor of London/Transport for London
2009

Manual for Streets
Department for Transport
2007

Manual for Streets 2
Department for Transport
2010

Paving the Way
CABE
2002

Capacitycheck
Urban Design Skills
October 2008

Safer Places
The Planning System and Crime Prevention
Office of the Deputy Prime Minister
2004

Living with risk
Promoting better public space design
CABE Space
2007

Traffic Management and Streetscape
Local Transport Note 1/08
Department for Transport
March 2008

The Play Strategy
Department for Children, Schools and Families
2008

Shared Space in the Public Realm
Policy Statement
Joint Committee on Mobility of Blind and Partially Sighted People
October 2005

Open space strategies
Best practice guidance
Mayor of London/CABE Space
2009

Pedestrian Guardrailing
Local Transport Note 2/09
Department for Transport
February 2009

Public space lessons
Adapting public space to climate change
CABE Space
2008

The Death and Life of Great American Cities
Jane Jacobs
1961

The Edinburgh Standards for Streets
The City of Edinburgh Council
November 2006

Mayor's Transport Strategy
Statement of Intent
Mayor of London
May 2009

By Design
Urban Design in the Planning System
DETR

Making Design Policy Work
CABE
June 2005

Urban Design Compendium
English Partnerships

Way To Go
Mayor of London
November 2008

Designing and Planning for Play
CABE Space
October 2008

PPG13 Transport

Making Design Policy Work
CABE
June 2005

Civilised Streets,
CABE Space
2008

Good Design: The Fundamentals
CABE
2008

Braking Point
20mph speed limits in London
London Assembly
April 2009

Shared Space – Room for Everyone
A New Vision for Public Spaces
Shared Space
June 2005

This way to better residential streets
CABE Space
2009

Ground Control
Fear and Happiness in the Twenty First Century City
Penguin Books 2009

London's Great Outdoors
A Manifesto for Public Space
Mayor of London
November 2009

Better Streets
Practical Steps
Mayor of London
November 2009

Living with Risk
Promoting Better Public Space Design
CabeSpace 2007

Shared Space Safe Space
Ramboll Nyvig
2010

Better Green and Water Spaces
Practical Steps
Mayor of London
November 2009

www.thegreenguide.org.uk