



HOUNSLOW PFI – STREETSCENE DESIGN GUIDE {SDG}

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NOTE

Street Scene Design Guide (SDG) means the document produced by the Authority as a companion guide to Manual for Streets, which gives guidance on acceptable materials and design for streets in the London Borough of Hounslow.

This Streetscene Design Guide (SDG) is referenced in Schedule 35 of the Highways Maintenance PFI Contract as one of the key policy document which is to be adhered to by the Service Provider as set out in clauses 12.3 (Streetscene **Design Guide**) and 72A (Compliance with the Authority Policies), and referenced in Schedule 3 Output Specification Section F Performance Target 10.3

The document covers work within the London Borough of Hounslow's Project Network. This also includes all work that is scoped as part of the Highways Maintenance PFI Contract.

This document outlines the principles for anyone who is responsible for making design, management and operational decisions that affects the streets of the Borough of Hounslow. Its purpose is to ensure consistency throughout the Project Network and promote the principle of "Better Streets". All references to policy documents, design guides and regulations within this guide were correct at the time of writing the initial SDG. When using this guide please refer to the latest available revision of these documents.

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1 INTRODUCTION

Over recent years there has been an increasing recognition in national policy that streets contribute in many ways to the economic, environmental and social functioning of a town or city and do much more than simply provide the infrastructure for vehicle based transport systems. Streets are important public places. They represent a large proportion of the public realm and most buildings and urban activities front onto them.

Hounslow is a London Borough located in the west of London and borders Heathrow Airport (itself located in the London Borough of Hillingdon).

The elongated shape of the Borough stretches east-west from the high-density residential areas in Chiswick of inner London character to open and rural landscapes and Green Belt in Bedfont and Feltham. The Borough has hundreds of listed buildings (over 30 Grade 1 Listed) and many conservation areas but also considerable areas in need of regeneration.

The Borough's position on the outskirts of London has made it a key route for highways since Roman times and due to its strategic location between Heathrow Airport and Central London it is today home to several major national and international companies, business parks and industrial estates

In contrast to these benefits that Heathrow brings to the Borough, the proximity of the airport also has negative effects on the Borough in the form of noise levels, air quality and traffic congestion.

The street network in the Borough comprises over 429km of roads and 775km of footways and 23 km of Public Rights of Way (PRoW). The Borough also has a high proportion of roads managed centrally managed by Transport for London known as TLRN roads. These include the A4 (Great West Road), A30 (Great South-West Road and Staines Road), A312 (The Parkway), A316 (Great Chertsey Road and Country Way), the A406 (North Circular) and A205 (South Circular) roads. Finally the Highway Agency also controls a section of the M4 motorway running through it.

The street environment in the Borough of Hounslow is one of the Public's major concerns. Reducing litter, improving condition of roads/pavements, and keeping streets safe are therefore high on the list of priorities for the Council.

Until recently the focus on street design in the London Borough of Hounslow, and in most local authorities across the country, was principally concerned with vehicle movement. This guide reinforces the wider importance of streets as 'Places' where people work and live, and demonstrates the role that good quality design and maintenance can make to improve the Streetscene for pedestrians, cyclists and all vehicle users living and working in the Borough.

1.1 SCOPE AND AIMS

This Guide forms an essential reference document for anyone who is responsible for making design, management and operational decisions that affect the streets of the Borough of Hounslow.

It promotes a holistic, cooperative, and inter-disciplinary approach to Streetscene design that ensures good principles are more widely adopted and a higher quality of implementation and maintenance is achieved.

The guide adopts a new approach to planning and designing urban streets, based on their 'Link' and 'Place'¹ functions, which include transport performance, economy and environmental indicators. As a Link, a street is for movement and designed for users to pass through as efficiently and conveniently as possible, in order to minimise travel time; while as a 'Place', the street is a destination in its own right, where people are encouraged to spend time and take part in activities. This approach has led to the development of new ways of Streetscene design for both of these functions, which inform the strategic prioritisation of improvement works on the road network, as well as the design solutions promoted in individual locations.

The guide is to be applied when; designing and reviewing schemes, as well as to assess the suitability for adoption of new network sections.

Finally, this document is the Council's corporate policy document for all matters related to the Streetscene.

It defines an array of design solutions for the Streetscene in Hounslow with the aims of coordinating both appearance and functionality while achieving consistency across the road network through a hierarchy of design solutions and options.

1.2 AUDIENCE

This guide encourages holistic working between all departments within the Council and their respective Supply Chain partners (SCP) emphasizing the collaborative discussions that have informed it and the consensual sign-up to and adoption of its principles. This document is endorsed and accepted by those who oversee the design and management of the Borough's streets (see Appendix A for list of Consultees).

The guide is aimed at everyone who, through their work or decisions, will have an impact on the Streetscene and public-realm, including but not limited to:

- Elected Members
- Local Authority Officers
- Transport for London
- PFI Service Provider
- PFI Operating Company
- Supply Chain Partners
- Statutory Services Companies
- Developers
- Network Operators
- Emergency services.

1.3 STRUCTURE OF THE DOCUMENT

This guide is set out in the 7 following chapters:

- Chapter 1 sets the scene for the guide;
- Chapter 2 underpins the Borough's principles for Streetscene design and maintenance.

¹ Link & Place: A Guide to Street Planning and Design

- Chapter 3 describes the processes to be followed when considering altering the Streetscene in the Borough.
- Chapter 4 focuses on the application of the principles on specific Streetscene design.
- Chapter 5 defines the Concept of Whole Street Environment (WSE) Schemes in the Borough.
- Chapter 6 provides guidance on adequate vertical and horizontal street design elements to be considered when adding to or altering the Streetscene and
- Finally, Chapter 7 focuses on the maintenance aspects of Streetscene design.
- This Guide also contains a list of adopted standard details in Appendix B, a checklist of Borough Traffic and Sign Variations in Appendix C, and a checklist of Borough Street Furniture and Materials in Appendix D.

1.4 HOW TO USE THE GUIDE

All the principles and recommendations within this guide should be followed. In exceptional circumstances it may be necessary to deviate from the guidance in which case specific agreement will be required from the 'Streetscene Review Panel'.

The following 5 steps outline the key stages in using this guide:

- Verify the 'Link' and 'Place' category of the street (see paragraph 4.1)
- Check whether the scheme is in an 'Area of Distinctiveness' (refer to chapter 4.2)
- Apply the design principles to develop the scheme based on Chapter 4.3
- Specify and use design elements accordingly based on Chapter 6 and Appendix D.
- Complete the 'Streetscene Principles Sign-Off Sheet' referring to the four core principles (if chapter 3.1 applies)
- Schemes which depart or do not follow the guidelines presented in this document to be reviewed by the Streetscene Review Panel for sign off or otherwise (see chapter 3.2).

1.5 LEGISLATION AND POLICY CONTEXT

The commitment to improving the street quality in Hounslow shall be in accordance with Acts, Regulations supported by national, regional and authority policies, relevant Codes of Practice, good industry guidance, and delivered mainly through the technical solutions provided in the PFI Contract to maximise value for money.

Key drivers from internal, regional and national policy are identified throughout the guide to reaffirm the Borough's commitment to improving street quality in the London Borough of Hounslow.

All 'Policy' references contained within this guide must be adhered to. Any 'Guidance' references should be followed as a matter of course.

1.5.1 LOCAL POLICY AND GUIDANCE

Local policy underpinning this design guide includes the 'Unitary Development Plan' (UDP) adopted in December 2003 (amended and saved as of 28th September 2007) and other related guidance and policy documents. The specific policies in the local UDP include those in Chapter 1 with the principal objectives to give priority to pedestrians, cyclists, and public transport, and to create a safe, healthy and pleasant environment, particularly with regards to air quality. 'Chapter 1 - Design and Layout' of the 'UDP Supplementary Planning Guidance'², also provides guidance and standards on the design of buildings and outdoor spaces.

The 'Local Implementation Plan' (LIP)³, which contains six transport objectives to link to the council's executive priorities. These are to make the Borough:

Safe: To reduce the number of people killed or seriously injured in road traffic collisions, and increase the perception of personal safety in the public realm;

Environmentally Sustainable: To reduce transport related CO2 emissions and other air pollutants, and maximise the system's resilience to the effects of a changing climate;

Attractive: To improve residents and visitors satisfaction in the quality of the street environment and maximise the amenity value of public spaces where possible;

Accessible: To ensure the transport system facilitates access to jobs, services and leisure opportunities, regardless of disability or social circumstance;

Healthy: To maximise the opportunity for the transport system to improve health outcomes by removing real and perceived barriers to the uptake of active travel;

Efficient: To ensure that the transport system is managed appropriately to reduce traffic congestion and to maximise the current capacity of the network – in particular unlocking regeneration opportunities.

The Hounslow Plan, June 2008: 'Building Pride, Borough Wide' where one of the top 10 promises from the Borough will be to invest an extra £2 million into keeping roads and pavements safe and in good condition.

Hounslow's Sustainability checklist 4 has been developed to help assess the social, environmental and economic impacts of development in the Borough of Hounslow.

Character Appraisal statements have been produced for each one of the conservation areas in the Borough of Hounslow⁵. Management guidelines are in draft and in the process of being updated in consultation with the community and this 'Streetscene Design Guide'. These guidelines link to the Executive's policy to "Improve urban design particularly in the Borough's conservation areas" and should influence the Borough's own schemes.

1.5.2 REGIONAL POLICY AND GUIDANCE

The value of good design in the Streetscene is also stressed in regional guidance:

'Better Streets', published in November 2009 by the Mayor of London, that the involvement of London's Boroughs and the engagement of local communities are vital to the successful formation of vibrant, loved spaces within London.

The Mayor is focusing more than £180 million over the next three years on improving London's streets and has launched the Great Spaces initiative which will support the revitalisation of the

² February 1997

³ (2006 – 2016)

⁴ The London Borough of Hounslow Sustainability Checklist 2003

⁵ March 2006, et seq. and identified on the conservation pages at www.hounslow.gov.uk/conservation

capital's unique network of public spaces, and celebrate how London is transforming its streets, squares, parks and riverside walks into places people will want to use and enjoy all year round.

'Streets for All'⁶ provides best practice advice on detailed Streetscene design issues within the context of historic townscapes. It promotes a more sensitive and bespoke approach to Streetscene design that places greater value on place, historic features and local distinctiveness.

'The Thames Landscape Strategy' (2009 -2010)⁷ vision is to 'Conserve, promote and enhance for the future, one of the world's great river landscapes between Hampton and Kew'. The London Borough of Hounslow is a partner of the strategy and one of the objectives of the strategy is to protect and enhance the natural and man-made landscape of the river.

'Streetscape Guidance 2009, A guide to better London Streets'⁸, describes design and maintenance guidance, technical standards and management procedures for streets forming part of the transport for London road network. Though targeted only at TRLN roads its approach is of interest to other London Borough highway authorities as a source of potential practice advice for design and maintenance of their Streetscene.

The 'Mayors Transport Strategy' is part of a strategic policy framework setting out the vision for London's development over the next 20 years. It aims to deliver a vision of a more efficient and better integrated transport system, which '...should excel among those of world cities, providing access to opportunities for all its people and enterprises, achieving the highest environmental standards and leading the world in its approach to tackling urban transport challenges of the 21st century'.

Six goals set out how this overarching vision should be implemented:

- Support economic development and population growth
- Enhance the quality of life for all Londoners
- Improve the safety and security of all Londoners
- Reduce transport's contribution to climate change and improve its resilience
- Support the legacy of the London 2012 Olympic and Paralympic Games

Key to delivering the goals set out by the Mayor's Transport Strategy is the development of a holistic understanding of London current and future demands on the transport network. The Road Task Force was charged with the challenge of developing a long-term strategy for London's roads to address the increasing demand on the road network.

In 2013, the Road Task Force published 'The vision and direction for London's streets and roads'. This document sets out what is needed in the short, medium and long term to achieve a road network that:

- Enables people and vehicles to move efficiently on London's streets and roads
- Transforms the environment for cycling, walking and public transport, and improve the public realm
- Provides better and safer places for all the activities that

take place on city's streets, and creates an enhanced quality of life

The Road Task Force also sets out a new framework that takes account of local and network priorities and aims to guide operational, policy and investment decisions. The priorities for streets and roads will differ depending on the role they play within the network and their place specific context.

Many of London's streets and roads cater for high volumes of 'movement' by pedestrians and/or vehicles, while others are quiet local streets. Streets and roads are also 'places' such as shopping and leisure destinations, major growth area, or local neighbourhoods.

The Roads Task Force proposed nine 'Street Types' representing the range of functions that the road network provides. The framework is intended to enable TfL, the boroughs and stakeholders to:

- Set priorities for different streets and roads, and make tradeoffs accordingly
- Reflect changing functions and aspirations as streets and areas change
- Identify the tools that may be appropriate locally to deliver change
- Balance place-specific needs for intervention at a strategic level to keep London moving

'The Cycling Revolution'⁹ - The Mayor of London and Transport for London have produced this document that outlines ten objectives for a cycling London, bringing together in one place the details of how London's cycling revolution will be delivered. It sees the launch of three major programmes designed to turn London into a cyclised city: the London Cycle Hire Scheme, Cycle Superhighways, and Biking Boroughs.

1.5.3 NATIONAL POLICY AND GUIDANCE

National documents that have informed the 'Streetscene Design Guide' include:

PPS 1 "Creating Sustainable Communities", Annex C, states that planning should encourage good design and that local planning authorities should plan positively to achieve good quality urban design by adopting clear policies and guidance – taking account of the good practice set out in 'By Design'¹⁰.

'Manual for Streets 1 & 2'¹¹ provides national government guidance on the design of new and existing streets. Manual for Streets 1 relates to residential streets and Manual for Streets 2 covers all other street types such as corridors and town centres.

Both documents recognise that highway authorities must provide for and balance both the movement and place functions of streets. They provide advice on managing the design process whilst also advocating the adoption of new 'quality audit' procedures to supplement road safety audits with further assessments of place, smarter choices and townscape issues.

'Link & Place: A Guide to Street Planning and Design'¹² describes

⁶ (London and South East England), English Heritage, Mar 05

⁷ Hampton to Kew Action Plan

⁸ Transport for London

⁹ May 2010, Mayor of London and Transport for London

¹⁰ CABE and DETR: 2000

¹¹ DfT: 2007 & 2010 (supersedes DB32 for residential streets design)

¹² 2008 | Landor Publishing, Peter Jones, Natalya Boujenko, Stephen Marshall

an integrated approach to the planning and design of streets to assess, weight and balance both the movement and social/townscape functions of streets. This is intended to inform the strategic prioritisation of improvement works about a network, as well as the detailed design solutions promoted in individual locations.

CABE 'Hallmark of Sustainable City and Manual for Sustainable Cities'¹³ sets out the practical and policy responses to climate change that CABE believes are needed to ensure towns and cities are genuinely sustainable places. It specifically provides policy framework, leadership advice and best practice guidance on highways elements such as streets layouts and public spaces that enable positive actions towards sustainable cities.

In addition, the following national documents reaffirm the importance of providing for the social use of the Streetscene:

'The Play Strategy'¹⁴ sets out the government's commitment to deliver child friendly communities by 2020. This includes providing local streets and that are safe and interesting places to play, and routes to children's play spaces that are accessible to all.

'Local Transport Note 1/08 - Traffic Management and Streetscape'¹⁵ provides advice on design process to ensure that greater consideration is given to place and townscape issues when developing traffic management proposals – with the objective of reducing unnecessary impacts on local place character as a result of highway interventions.

'Local Transport Note 3/08 - Mixed Priority Route Practitioners Manual'¹⁶ summarises the results and lessons learned from a number of schemes developed as part of a government funded programme. This looked to achieve improved design solutions for busy arterial roads with a high place function (such as high streets) that have historically suffered from poor townscape quality owing to traffic dominance (with subsequent deterioration of investment) and high incidence of accidents. The majority of schemes pursued a townscape-led approach to resolve these issues, employing a range of innovative practices that challenged conventional thinking on street design and how most cost-effectively to address road safety issues. The results suggest that, through comprehensive environmental improvements along a lengthy corridor, it is possible to reduce casualties significantly whilst creating a substantially improved townscape that provides greater priority for pedestrians and social use, yet without unduly affecting traffic flow.

Measuring Quality of Life: Does Local Environmental Quality matter¹⁷ - Quality of life has climbed the political agenda in recent years. ENCAMS has made considerable progress towards identifying that our local environmental quality is important for a good quality of life. Their findings revealed that quality of life consists of many different factors, of which 'neighbourhood' is a significant component, having an effect on a person's quality of life that could be both positive and negative. The availability of parks and green spaces, activities for teenagers and centres for the community were all important, as were a sense of belonging or community spirit and perceived or actual levels of crime and antisocial behaviour.

1.6 VISION FOR HOUNSLOW

Streets make up the largest part of our public realm and form the back bone of all buildings, open spaces and communities in the Borough. They require a significant amount of design and maintenance which need to accommodate movements and destinations of all pedestrians, cyclists and vehicles.

Our vision is to transform the Streetscene of the Borough into a fit for purpose, well designed and maintained public realm where the needs and views of all street users are considered and balanced through the cooperation and creativity of our designers, managers and communities, so that we can build pride in the look and feel of our Borough.

1.7 GUIDE REVIEW PROCEDURE

To ensure that relevant Acts and Regulations, policies, Codes of Practice and guidance are current and up to date, regular reviews of the SDG shall be conducted in accordance with Schedule 15 Change Protocol and or Review Procedure Schedule 6 of the PFI Contract.

¹³ 2009 CABE

¹⁴ Department for Children, Schools and Families and Department for Culture, Media and Sport

¹⁵ DfT, Mar 08

¹⁶ DfT, Oct 08

¹⁷ ENCAMS August 2007

2 STREETSCENE PRINCIPLES

This chapter defines the London Borough of Hounslow's four key principles for Streetscene design and maintenance. These four principles are universally applicable to all streets in the Borough and must be considered by the project team (sponsor/client, designer, and contractor) at all stages of a Streetscene project. Irrespective of the funding source, and within or outside the scope of the PFI scope of the Investment Works of the PFI Contract the Streetscene Principles Sign-Off Sheet' shall be completed for every Streetscene project meeting the criteria defined in chapter 3.1.

These principles should form the starting point for all work within the public realm. They are not listed in order of priority and decisions on their relative importance can only be made by the project team on a case by case basis. Poor designs often give primacy to just one principle at the expense of the others. Generally, a holistic, balanced approach is the key, with no one principle given total dominance. All principles require the involvement of the community early on in the design process in order to achieve the aspirations of improved quality of life for the whole community in the London Borough of Hounslow.

2.1 PRINCIPLE 1: STREETS MUST REFLECT THEIR FUNCTION

The wide range of activities taking place on Hounslow Borough's streets can be associated with one of two broad types of street functions: 'Link' and 'Place'.

As a 'Link', a street provides for through movement by a variety of modes, from private car or van to bus, bicycle or on foot. The primary requirement of this function is to provide a continuous, linear path from the beginning to the end of a journey, with minimum disruption and a seamless connection from one street to the next.

As a 'Place', a street is a destination in its own right and a location where activities occur on or adjacent to the street. A 'Place' user is someone wishing to make use of certain facilities that are provided on or alongside that particular street, and will usually access them on foot. While such people are normally classified as 'pedestrians', they are not passing through the area – they are spending time in the area, and may be carrying out a wide variety of activities (e.g. shopping, working, eating, talking, waiting, resting).

Some traffic and transport-related activities on the street are also associated with 'Place'-related activities. For example: loading/unloading, parking by employees, customers, residents, etc.; and buses, trams and taxis stopping to drop off/pick up passengers.

This 'Link & Place' approach balances both the movement and social/townscape functions of streets, helping to mediate between the competing activities and demands.

One of the key messages from the 'Link & Place' approach is that there is no such thing as a fixed user hierarchy that applies across all parts of the street network. It needs to be 'Link' and 'Place' level sensitive, also taking into account land uses and modes of transport.

The following checklist for Principle 1 must be shown to have been considered before commencing any Streetscene design project (Using 'Streetscene Principles Sign-Off Sheet' in Appendix F):

1. Acknowledge the functions of the street ('Link' and 'Place') as a route for pedestrians, cyclists, and motor vehicles and a place where people live, work, go shopping and socialise.
2. Ensure spaces are designed to accommodate requirements and priorities of all users and uses, taking into account different patterns of activity throughout the day, week, month or year.

2.2 PRINCIPLE 2: STREETS MUST BE INCLUSIVE, SAFE, AND ACCESSIBLE:

In order that streets are socially inclusive they must be safe both during day and night time hours, convenient and accessible to all. They should be legible from a distance and up close, with access and linkages to surrounding destinations and the varying needs of different users groups acknowledged and catered for in street planning and design.

Special consideration must be given to ensure ease of access and movement for vulnerable users between and within public areas by the careful provision, siting and design of parking areas, paths, dropped kerbs, raised tables or entry treatments, pedestrian crossings, street furniture and open space.

Safety in the street refers to both minimising traffic collisions and maximising personal safety. Streets need to be free of crime, anti-social behavior and vandalism.

The sensitive location of street furniture, use of tactile paving and colour contrast will ensure that road safety and amenity are incorporated into the design of the Streetscene.

It is important to recognise that national road safety policy will always be considered in the context of the Borough's vision for a quality Streetscene. Where road safety problems are identified, the needs and views of all street users must be considered and balanced. In some places segregation may be appropriate whereas in other locations shared space should be an option.

Crime prevention and fear of crime must also be considered in the design of any Streetscene. The careful use of amenity lighting and the design of natural surveillance are ways to reduce the likelihood of crime. Designs should where-ever possible be free from hiding places that could encourage criminal behaviour.

The London Borough of Hounslow has responsibilities under the Equality Act 2010 for people with disabilities. The Equality and Human Rights Commission regulates the implementation of the Equality Act 2010 and their guidance on Inclusive Design states that an inclusive environment must be:

- Accessible to all people without undue effort, special treatment or separation.
- Able to offer people the freedom to choose how they access and use it, and allow them to participate equally in all activities it may host.
- Able to embrace diversity and difference.
- Safe.
- Legible and consistent.
- High quality.

The following checklist for Principle 2 must be considered for all new improvement Streetscene design project Streetscene

1. Ensure the differing needs of all groups of people in the Community are met including the elderly, children, those with disabilities, pedestrians, cyclists, and people with buggies, to ensure an inclusive environment that breaks down barriers and prevents exclusion.
2. Implement both road safety and crime prevention measures to ensure the safety of all street users and where necessary commission a 'Street Quality Audit' and 'Community Street Audit' during day and night time.

compatible with their context. (Refer to 'Place' and 'Area of Distinctiveness' definitions in Chapter 4);

4. Use materials, furniture and equipment in the Streetscene that are coordinated and recommended within this guide.

2.4 PRINCIPLE 4: STREETS MUST BE SUSTAINABLY BUILT AND MAINTAINED

"Well designed places last longer and are easier to maintain, thus the costs of the design element are repaid over time"

A well designed built environment also generates large unquantifiable benefits in terms of human well-being including physical and mental health, good social relationships, reduced crime, and higher productivity, but bad designs and a dilapidated Streetscene have the opposite effect.

All Streetscene materials and furniture shall be of the quality and durability compatible with their function. Good workmanship, attention to detail and finishes can make all the difference. Future maintenance needs and ease of repair should be researched before specifying equipment.

The following Checklist for Principle 4 must be referenced before commencing any Streetscene design project*:

1. Review all Streetscene components to ensure they perform to relevant technical criteria.
2. Consider the quality of the street design detailing, implementation and workmanship.
3. Consider the whole life costing of all specified materials and street furniture to maximise robustness but minimise the maintenance liability.
4. Consider and provide for the 3 interrelated sustainability aspects such as economic, social and environmental in all Streetscene projects.
5. Consider innovative in technical solutions in the Streetscene projects by reviewing new products and technology.

2.3 PRINCIPLE 3 STREETS MUST BE ATTRACTIVE AND FULL OF CHARACTER

Ultimately it is what a street looks like, as well as how it functions, that will influence people's behaviour in making a street successful. Whilst attractiveness is a subjective quality, designs that aim for simplicity are the most likely to succeed in a wide range of contexts.

The design and layout of a proposed Streetscene must strive to be compatible with, and make a positive contribution to, the character of the locality. The proposals must relate satisfactorily to the history, style and architecture of the adjoining buildings and spaces to ensure that distinctive places are created. The context and character of an area must be understood before redesigning a street.

The following checklist for Principle 3 must be referenced before commencing any Streetscene design project:

1. Review the cumulative impact of design decisions on the appearance of the street, taking into account the simplicity of the designs;
2. Consider the context and character of the street and how it relates with the layout, architecture, planting, and surrounding views. (Refer to 'Place' and 'Area of Distinctiveness' definitions in Chapter 4);
3. Consider all existing and proposed Streetscene furniture collectively to ensure they work well together and are

3 SDG PROCESSES

Changes to the Project Network can be required as a result of various events such as but not limited to:

- Safety reviews at known black spots or around public building used mainly by vulnerable users (schools, library, retirement homes and so on).
- Implementation of corridors schemes aimed at improving safety, reliability, and the use of sustainable modes of transports.
- Addressing local concerns following public engagement at public forums and meetings.
- Monitoring processes such as Asset Management Plan or condition inspections and surveys.
- Core Investment Work within the PFI Contract
- Development work by third parties.

The following paragraphs give details of a number of processes which have been devised to ensure that the guidelines set out in the SDG are followed to ensure:

- Consistency of approach
- Appropriate stakeholders consultation (as defined by the SDG)
- Value for money

3.1 SDG SIGN-OFF SHEET

A SDG sign off sheet has been devised to help demonstrate how proposed schemes meet the four principles set out in Chapter 2 of the SDG. The sheet allows the schemes' promoters to indicate how the project meet these principles and provide justification for areas where departures are being sought.

A sign off sheet should be completed for all schemes which are developed externally such as those put forward by private developers. This sheet is to play an integral part in the assessment made by officers considering granting planning applications and future adoption of road and footway section lengths.

For schemes developed internally, by the authority or through the PFI Service Provider, a sheet will only be needed for improvement schemes with value in excess of £500,000 or when a departure from the guidance is required. In these instances the sheet is to be completed by the designer of the scheme.

All Streetscene Sign-Off Sheets are to be submitted to the Service Provider's Engineer who will review the scheme and the required departure with the assistance of the Streetscene review panel.

A template of the 'Streetscene Principles Sign-Off Sheet' is enclosed in Appendix F.

3.2 SDG REVIEW PANEL

The Streetscene Review Panel is responsible for agreeing whether or not to sign off the schemes based on the information provided. When a scheme cannot be signed off, its promoters might be asked to supply additional information and justifications. If these are found to be satisfactory by the panel the promoters might be asked to make design changes in order for the scheme to be allowed to proceed.

Panel members will meet up to once a month for 2 hours to review current schemes. The meeting is to be organised and chaired by the Service Provider's Engineer. Other members of the panel include:

- A representative from the Environmental Service and Contract Management Team (Borough)
- The SPV engineer – (Service Provider)
- The Design and Construction Manager – (Operating Company)
- The Operation's Manager (Operating Company)
- The Network Manager – (Operating Company)
- The Environment Services and Sustainability Manager (Operating Company)

Any departures from SDG document shall be dealt in accordance with clause 72A.1 and 12.3 of the PFI Contract and appeals on decisions from the panel will be directed to the PFI Network Board.

As well as reviewing schemes in relation to this guide the panel is responsible for the periodic review of this document and for arranging its update as appropriate.

3.3 SDG AND COMMITTEE REPORTING

In preparing Committee reports to seek the approval or otherwise of schemes on the project network, borough officers have the discretion to include a section in their report detailing the compliance or otherwise between a given scheme and this guidance. Comments and advice from the Panel can be sought by Officers to inform their report.

3.4 SCHEME SPECIFIC PROCESSES

All schemes shall undertake stages 1, 2, 3 and 4 safety audits. In addition various industry wide processes shall be required to demonstrate that the four SDG principles have been met. These include but are limited to:

- GRAF Assessment
- PERS Audit
- Street Quality Audit
- Community Audit / Walkabout

Although the SDG does not require for these to be carried out systematically it might require the schemes' promoters to demonstrate that relevant ones have been followed and ask to be presented with the relevant reports and conclusions.

4 APPLYING THE PRINCIPLES

4.1 ‘LINK & PLACE’ STREET CLASSIFICATION MATRIX

Historically the urban street network was classified along one dimension reflecting the importance of its traffic movement function. The ‘Link & Place’ approach in the London Borough of Hounslow provides a more comprehensive two-dimensional street classification, in which every kind of urban street is represented by a cell in a ‘5 x 5’ matrix with categories ‘1 to 5’ for ‘Link’ and ‘A to E’ for ‘Place’. Each of the 25 cells covers a street type in the Borough from major arterials down to residential cul-de-sac.

The ‘Link’ classification of each street is largely based on the existing Borough street hierarchy but has been boosted in some locations to take account of streets with increased bus flows, or form part of a ‘Designated Overnight Lorry Route’, or those forming part of the strategic cycle network, or where the ‘Link’ function of the street has increased since it was previously designated.

Category			Description
Link Status	1	Strategic Route	Strategic Borough Principal Roads (A315 only)
	2	Main Distributor	Other Principal Roads i.e. Major urban network and inter-primary links. (Network)
	3	Secondary Distributor	Classified roads (B & C) and other roads of more than local importance including unclassified urban bus routes.
	4	Link Street	Roads linking the Secondary Distributor Network.
	5	Local Access Street	Streets serving limited numbers of properties carrying only local access traffic.

The ‘Place’ classification was developed from local knowledge involving Council officers from all departments making design, management and operational decisions that affect the streets within the Borough of Hounslow. Rules for each type of places were then agreed and applied across the network (example of these rules can be found in Appendix G).

The following table shows how 25 individual cells that represent a particular type of street which is a combination of its Link & Place status. The percentage figures shown within each cell show the distribution, by length, of the street types throughout the Borough.

		Place				
		Regional	Borough	Area	Neighbourhood	Local
Category		A	B	C	D	E
LINK	1 Strategic Route	0.22%	0.22%	0.72%	1.29%	1.04%
	2 Main Distributor	0.22%	0.57%	1.15%	1.69%	2.83%
	3 Secondary Distributor	0.0%	0.18%	0.97%	2.55%	4.56%
	4 Local Street	0.04%	0.18%	0.86%	2.33%	4.20%
	5 Local Access Street	0.14%	0.61%	1.26%	13.63%	58.57%

Table Shows Current Network Percentage Split

“Streets with one bus route should have a minimum Link status level of 4, those with two or three routes a minimum ‘Link’ status of level 3, and those with four or more bus routes, a minimum ‘Link’ status level of 2.”

4.2 REFLECTING AREA DISTINCTIVENESS IN THE BOROUGH

In addition to the ‘Place’ status of every street, specific areas of the Borough of Hounslow have a certain character of their own, which needs to be reflected in the design of the street.

The following 5 areas or types have a special character and have been highlighted as ‘areas of distinctiveness’ within the Borough of Hounslow where specific design considerations will be necessary. These areas are mapped in Appendix H

4.2.1 AREA OF DISTINCTIVENESS U: ‘THE ROMAN/ LONDON ROAD’

London Road (A315) enters the Borough from the east as Chiswick High Road and traverses the length of the Borough, although identified by local names in special areas e.g. ‘Brentford High Street’, ‘London Road’, ‘Roman Road’ and ‘Staines Road’. From Turnham Green westward this route formed a key Roman road between London and the west; and as an early major highway had many settlements along its length. By the late 17th century it was well established as a coaching road and described in the 1814 Turnpike Act as the “Great Western Road”.

Hounslow town grew up as the first stop out of London for nearly all westbound coaches, with the major destination being Bath. It was the last point before Hounslow Heath and the open countryside where the chance of attack was greater and therefore fresh horses were essential.

The Roman Road route is designated an Archaeological Priority Area (APA) and diverges northward from the eastern length of London Road (Chiswick High Road) near Chiswick Road. The eastern remainder of London Road is also of special character.

The London Road as a whole is highlighted on the Heritage Fringe map in Appendix H. Any development or redevelopment of the streetscape on or around this historic route should contribute to its visual amenity and enhance its historic context.

4.2.2 AREA OF DISTINCTIVENESS V: CONSERVATION AREAS

Many of the settlements and estates along the historic routes in the Borough are of significant townscape and architectural value.

Pevsner¹⁸ notes: “The Parks enfold mansions of national repute: Chiswick House, Gunnersbury, Osterley, Boston Manor and Syon House. Away from the main roads are picturesque riverside stretches of Chiswick and less familiar interesting houses in Isleworth.”

Any Streetscene works within a conservation area, including Streetscene maintenance and traffic interventions, should strive to be compatible with and make a positive contribution to the character of the locality.

New Conservation Areas may be designated in the future. The 27 current ones are mapped, in Appendix H. The character and appearance of conservation areas derive from their collective as well as individual components, with the Streetscene of great importance to the quality of most of them. Conservation area character is particularly vulnerable to insensitive replacements, groupings and general urban standardisation of aspects of the public realm.

4.2.3 AREA OF DISTINCTIVENESS W: HERITAGE FRINGE

Some developed areas, often forming the “setting” of listed buildings and conservation areas, are more characterful through age, location or influenced by the high quality of nearby places. Even though not currently within a conservation area, their relationships and design result in distinctive buildings, streets and spaces. These areas may have survived through neglect, or because appreciated and so less threatened or because change has been successfully managed. However their attractiveness may lead to additional pressure for parking and other alterations.

Heritage Fringe areas are highlighted on map Figure 4.3 and include roads fringing Jersey Gardens (St Mary’s Crescent, Wood Lane); roads which fringe Chiswick Common; Chiswick High Road; the northern end of Chiswick Lane; and other streets leading south from Chiswick High Road (between and including Dukes Avenue and British Grove). Further areas being considered include Linkfield Road and St John’s Road and the roads of St John’s Gardens between them, and Mill Platt.

4.2.4 AREA OF DISTINCTIVENESS X: ARCADIA / THAMES POLICY AREA

The River Thames is London’s best known natural feature and is a major asset to London and the Borough of Hounslow, and affords regional significance as a strategic cultural area (London’s Arcadia). Riverside locations are also places of significant heritage and local character. Accordingly, their high townscape value is recognised in the local development plan, which designates these parts of the Borough as the Thames Policy Area.

It is vital that any new development or redevelopment in the Thames Policy Area optimises the potential of its riverside location and contributes to improving the quality of the Thames riverside environment. The high quality treatment of spaces

4.3 PRINCIPLES IN PRACTICE

The following paragraphs highlight how the principles detailed in Chapter 2 will be applied across the ‘Link & Place’ categories for a range of design considerations in the Streetscene. For each category a specified standard of furniture or paving material has been given, which must be adhered to.

Please also refer to Chapter 6 for detailed specification

between buildings is essential to the creation of attractive and inviting river environments. Design should pay regard to open spaces and buildings which may relate to and have an impact on the river; surrounding land uses and river related activities; and complementary designations such as Conservation Areas.

Note that this area also includes many Archaeological Priority Areas. Arcadia / Thames Policy areas are shown on the UDP proposals maps as updated, and highlighted in, Appendix H.

4.2.5 AREA OF DISTINCTIVENESS Y: RURAL/TRANQUIL AREA

Green spaces and open land are one of the Borough’s most valuable assets, providing attractive open landscapes and a haven for wildlife. They include River Brent and other natural and artificial water courses. Often on the fringes of the Borough, they also mark the boundary with adjoining local authorities, and the transition from urban to semi-rural. There is a general presumption against development on existing open spaces, due to the role that they play in preventing open sprawl, provide land for recreation and encouraging Brownfield regeneration. However, not all of the open land is of high quality and as such there is scope for considerable improvement.

Policies seek to arrest and reverse the deterioration of open land around the Borough, with landscapes being enhanced wherever possible and derelict land improved. In the event that development or redevelopment of land occurs near or within open land, including the Streetscene, it should include contributions to the improvement of the character and visual amenity. The open character of these areas is a notable contrast to the built up areas of the Borough and regard should be had to retaining its openness and nature conservation value whilst also ensuring these valuable green spaces are accessible for all to enjoy.

Rural / Tranquil areas (although sometimes containing large existing roads) coincide with nature conservation areas, green belt and metropolitan open land where urban encroachment is resisted. They are often part of Conservation Areas and may contain Archaeological Priority Areas. On public rights of way in smaller “local Open Spaces” (UDP policy) the character should be considered prior to urbanising paths etc.

4.2.6 ADDITIONAL CLARIFICATION

In order to ensure that the character of streets within conservation areas (Area of Distinctiveness V), heritage fringe (Area of Distinctiveness W), and additional heritage fringe is maintained the authority has requested that footway surfacing materials for schemes in these areas are maintained on a “like for like” basis. Refer to Appendix H for a map of these areas.

information on Streetscene furniture and materials:

4.3.1 ‘DE-CLUTTERING AND DE-ILLUMINATION OF REDUNDANT ASSETS

This is a priority across the whole Borough and should be carried out in accordance with the De-cluttering and the De-Illumination Policy documents approved by the Authority.

4.3.2 PROVISION FOR CHILDREN

¹⁸ Pevsner Architectural Guide, Bridget Cherry et al reprint version of 1999

The Government’s 2020 vision for play¹⁹ aims to ensure that local neighborhoods are, and feel like, safe, interesting places to play. When providing for children every care must be taken to ensure routes to play spaces are safe and accessible for all children on foot or bicycle, that children are able to travel freely around their local streets safely on foot or bicycle, that play spaces are situated away from busy roads where practicable and that consideration is given to developing playable routes within and between neighborhoods.

In ‘Hounslow’s Play Strategy: Delivering Quality Play in Hounslow’²⁴ the Council will ensure that children can play safely in a wide range of public spaces, including designated play streets, and that parents and carers feel confident about their children’s ability to public space. “The health and vibrancy of our local area depends to a significant degree on people’s perception and use of public spaces and thoroughfares...Planning, design and architecture, along with sensitive approaches to overseeing public space, can create the conditions necessary for the development of a sociable Borough, one that demonstrates its respect for children and young people and values them as part of a wider community.”

4.3.3 BANDING OF NETWORK SECTION LENGTH

Four banding categories ranging from 1 to 4 has been derived from the link and place matrix to inform the appropriate choice of street furniture and materials for each network section length. The various banding categories are represented in the table below:

Link	Place				
	A	B	C	D	E
1					
2		Band 1			
3			Band 2		
4				Band 3	
5					Band 4

4.3.4 PROVISION OF NEW LIGHTING

All new lighting provision with Central Management System (CMS) will be in accordance with Appendix A, B and C Part 1, Performance Standard¹ Lighting Design Requirements of the Highway Maintenance Contract.

4.3.5 20MPH ZONES

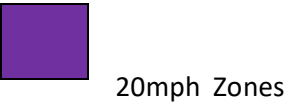
Streets with 20mph zones, limits or both help to strike a balance

between the needs of the local community and drivers.

It is generally recommended that 20 mph zones should be imposed over an area consisting of several streets and not just an individual road. For example, forming a self-enforcing 20 mph zone in streets surrounding a school would be likely to reduce the frequency of accidents not only in the immediate vicinity of the school, but also on the routes that children take to that school. In some cases the Borough may look to impose 20mph limits (without traffic calming features) on residential roads.

In specific circumstances 20mph zones may be appropriate outside of the ‘Link’ and ‘Place’ areas defined below, where there is restricted visibility or where the nature of a hazard is not obvious to approaching drivers.

	A	B	C	D	E
1					
2					
3					
4					
5					



4.3.6 HOME ZONES & COMMUNITY STREETS

As with 20mph zones ‘Homes Zones’ can create a high-quality street environment where the needs of the local community and drivers are balanced. The principles behind ‘Home Zones’ do not just help define a design or built layout, but also act as a catalyst in changing the street users way of interacting with and within the public realm. In particular they can help address issues relating to a deficit of play space, or otherwise help challenge engrained travel behaviour to assist in a shift towards non-car modes.

The London Borough of Hounslow fully supports the introduction of ‘Home Zones’ for new developments and Community Streets in existing streets. However the cost of such an intervention has often proved prohibitive, particularly in regards to retrofitting. As a result the council is trialing an initiative known as ‘Community Streets’, which is loosely based on the DIY streets methodology developed by the charity Sustrans. This project aims to explore low-cost solutions to tackling problems which have been identified by the local community in participating streets. In particular it is looking to assess the effectiveness of measures which may help to slow traffic speed without the use of vertical deflections, in compliance with the current Mayor of London’s Transport Strategy. Measures being investigated include carriageway narrowing, planting, public art, distinctive gateway treatments, on street cycle parking etc. The design process is very much ‘bottom-up’ - with residents first nominating their street for inclusion in the programme and then undertaking a community street audit to help inform the stage 1 designs, which are then further developed in close collaboration with them over several months. Initiatives to promote sustainable travel (for example

¹⁹

street parties with a focus on bike maintenance etc.) are also undertaken in this period, as is the wider awareness raising of initiatives such as car clubs, peer-peer car-pooling and electric vehicles.

Examples of the community streets are:

Layton Road (Brentford), Thornton & Mayfield (Chiswick) Oriel School (Hanworth), Cambridge Road (Hounslow), Brabazon Road (Cranford), Berkeley Avenue (Cranford), Chinchilla Drive (Cranford)

It is essential that the design of the Home Zones and Community Streets involves significant participation by local residents and local access groups. In new-build situations the Borough will engage with the developer to devise the most appropriate design solution for prospective residents.

It is vital that ‘Home Zones’ also fosters long term local ownership and participation in the management and maintenance of the Streetscene.

	A	B	C	D	E
1					
2					
3					
4					
5					



Home Zones & Community Streets

4.3.7 ‘SHARED SPACE’

The ‘shared space’ approach again aims to create more appropriate balance between all street users by introducing an uncertain driving environment, which encourages lower vehicle speeds and consequently allows pedestrians and cyclists to move around more easily.

‘Shared space’ schemes work best where traffic speeds and volumes are already low. They should be indicated by a change in surfacing in the carriageway and parking must be managed carefully to avoid poor parking behaviour.

Suitable provision must always be made for blind and partially sighted people since in the ‘shared space’ approach navigation is lost by the removal of kerbs and controlled crossings. The use of appropriate colour and texture changes in the surfacing are key measures to ensure the requirements of blind and partially sighted people are met.

Within the ‘Mayors Transport Strategy’ the Mayor will seek to: ‘protect and enhance the urban realm, with a series of ‘better streets’ schemes in Central London and London town centres. These will encourage pedestrians and vehicles to interact in a new and balanced way, negotiating with one another rather than being dictated to by signs, railings and traffic infrastructure that can

create unnecessary severance.’²⁰
When considering a shared space scheme all design considerations should be cross referenced with emerging DfT guidance.

4.3.8 PARKING AND SERVICING

Under-provision of parking in residential streets within the Borough has resulted in the conversion of many front gardens to parking areas and the formation of many illegal crossovers. Illegal crossovers and paved front garden can also damage existing grass verges and trees, has an effect on the surrounding architecture, the Streetscene and the character of the area and increases rainwater run-off leading to problems with flooding. This is a considerable problem in the Borough.

On-street parking is popular and well used across the Borough. It can provide a useful buffer between pedestrians and traffic and adds activity to the street. However it can also introduce road safety problems and reduce available carriageway width for general users, public and emergency services and be visually dominant within a Streetscene.

Generally, on-street parking is permitted in all ‘Link’ and ‘Place’ categories within the Borough. However when determining the level of new on-street parking within an area the following factors must be taken into account:

- The overall level of car ownership in the immediate area;
- The amount of off-street parking provided;
- The amount of allocated parking provided;
- The speed and volume of traffic using the street; and
- The width and geometry of the street and its junctions.
- The road’s status as a priority bus or cycle route

Parking bays and kerb lines must relate to building form. Street designs must, wherever possible, positively identify spaces for parking (positive parking). Care must be taken to avoid the barrier effect created by unbroken kerb parking by the use of kerb build outs around trees for instance. When implementing new on-street car-parking the following design issues must be considered:

- Spaces must be clearly indicated with road markings or changes of material;
- Parking recommended to be limited to small groups of five spaces separated by kerb build-outs, street furniture or planting to help to break up the visual impact and aid safe crossing;
- To aid street cleaning, on-street parking should drain towards the street; and
- Perpendicular or echelon parking should be considered in ‘Home Zones’ and 20mph zones where there is adequate space, as should permeable materials to aid the drainage of surface water..
- Positive parking regimes, avoiding the use of yellow line parking restrictions etc., will be encouraged in conservation areas.
- Rear access servicing must always take precedent over street side servicing. Where rear servicing is not possible

²⁰ Draft for Consultation leaflet published October 2009, page 11

servicing space for vehicles must be limited to essential needs and be unobtrusive. Wherever width allows, potential designated servicing bays may share footway area space but only be operational at off-peak hours of the day.

4.3.9 PROVISION OF PARKING FOR CYCLISTS

New cycling facilities will be a priority in 'Place' categories A-D. Refer to section 6.1.10 for location and design of cycle stands. The London Assembly has identified a lack of cycle parking in popular locations as a key barrier to increasing the number of cycle trips made. This is summarised in their report 'Stand and Deliver' (2009) where they highlight that despite recent increases in provision, the availability of cycle parking and the security of parked bikes remain the two biggest cycling-related concerns.

4.3.10 ADOPTABLE HIGHWAY SCHEMES

Developers should liaise with the Council to agree 'Link' & 'Place' status of new developments before commencing design. This will ensure the use of the correct materials and standards as specified in the guide and the adoption process. Any new streets should be

designed in accordance with this guide as agreed with the Council and as required through the 'design and access' aspects of planning consent procedures.

4.3.11 BOROUGH AND TLRN INTERFACES

As set out in TfL Streetscape Guidance²¹ any street works bordering a TLRN road or a neighbouring local authority should be integrated and coordinated. The Borough and designers should share information and co-ordinate with TfL or the neighbouring local authority to ensure that:

Comprehensive area based improvement schemes can be implemented using the resources and skills of a wide range of partners;

Seamless Streetscenes occur at administrative boundaries, avoiding abrupt changes in paving and street furniture materials and patterns; and

Improvement schemes are informed by a wide range of stakeholders through co-ordination and a consultation process, thereby avoiding abortive work.

²¹ 2009 Chapter 4: key Design Principles

5 WHOLE STREET ENVIRONMENT SCHEMES

The Whole Street Environment (WSE) concept and the associated WSE Schemes involve alterations from “fence to fence” and are a key part of the Council’s highways maintenance PFI project. Note that although an outline is given here the full WSE methodology is defined in method statement 24 of the PFI contract.

WSE Schemes will be carried out where carriageways and footways are in poor condition and where further opportunities are identified to combine works for footways and carriageways with treatment to other assets (lighting, trees and verges, draining, street furniture etc.). Combining replacement or upgrading of certain asset elements, which have not yet reached critical condition, with planned carriageway and footway works will result in more integrated design outcomes, improved value for money and less disruption to the local population. Where budget is available to implement a programme of WSE Schemes, they will be distributed evenly throughout the 5 committee areas of the Borough.

Scheme for consideration for WSE funding will display one or more of the following criteria:

- Planned Maintenance works are required to both the footways and carriageways; and
- The location has a ‘Place Status category’ of A, B, C or D. However category D would have a lower priority for selection.
- The location has been identified in the Network Safety and Integrity Report.

WSE schemes provide the perfect opportunity to re- evaluate the appropriateness and functions of a particular stretch of street by taking into account land uses and social movements and dynamics of that street and being more imaginative in the way the streets is designed and laid out. Redefining user needs is a priority in WSE schemes across all ‘Place’ categories A-D. This will be achieved through significant local community involvement with the Council in the form of hands-on community design workshops, walkabouts, steering group meetings, and public exhibitions building on the best practice developed as part of the Authority’s Community Streets Programme.

- The following case studies demonstrate the application of WSE schemes in Hounslow.

5.1 BEAVERS LANE, HOUNSLOW:

Beavers Lane, at the junction with Chinchilla Drive and Salisbury Road was a hot spot for excessive speeds. The junction included two mini roundabouts that did nothing to slow vehicles down.

The land use around the junction includes ‘The beaver’ pub to the north of the junction and a business park to the south. The land immediately around the junction consists of mounds of amenity grass with a few scattered trees. Beyond the open spaces is a mixture of residential housing and apartment blocks.

The roundabouts were removed and a new raised level crossing point installed across Chinchilla Drive and Beavers Lane. In addition 2 new landscaped and seating areas were created. One included a new seating area with 4 benches, a paved area running at the centre of one of the grassed areas. The second seating area was immediately

adjacent to the footway along Beavers Lane and opposite the Beavers pub, and included new retaining walls, paving, planting and 3 benches.

The scheme has greatly improved the traffic situation at this junction as vehicles now have to give way at the raised crossings and the new junctions. In addition the enhancements have also improved the visual quality of the Streetscene and the facilities for the local neighbourhood.

5.2 JUNCTION OF SPRING GROVE ROAD AND KINGSLEY ROAD, HOUNSLOW

Spring Grove Road, at the junction of Kingsley Road is located just south of the Great West Road at Hounslow. It included:

- A poorly maintained paved slope that divided the street from a pedestrian footway approximately 2m lower than the street.
- Overgrown planting and a dark and badly maintained fence at the top of slope made this footway a threatening route to use and attracting anti-social behaviour and litter.

The improvements at this scheme have resulted in a footway that today is a pleasant place to wonder through and even linger. The fence has been removed and replaced with a low black knee- high rail and the paved slope has been replaced with a grass bank and pale coloured cladding to the walls.

Overgrown vegetation has been removed and replaced with grass and tree planting. All these have greatly improved the setting of the street whilst also improving the quality and safety of the public realm for the pedestrians using the footway

6 STREET DESIGN ELEMENTS

This chapter forms the 'kit' section of the guide, bringing together a palette of materials, furniture and planting specification and drawing references to help design and maintain the street. Where relevant all materials and details will be referenced to highways specifications and adopted standard details contained within Appendix B and to maintenance requirements detailed in Chapter 7. A summary of all materials and details is also contained within the 'Palette of Borough Street Furniture' in Appendix D and 'Palette of Borough Street Furniture and Materials' in Appendix E.

All furniture and materials described within the following section and listed within the materials palette are not exhaustive and provide to the general appearance that is preferred by London Borough of Hounslow. However it is accepted that if a cost efficient alternative can be found that is of similar or better quality then this will be considered for use.

It is acknowledged that it may be desirable to use alternative furniture and materials for streets which have distinctive local characters, such as Community Streets, Conservation Areas. These are reflected within the palettes provided.

Advice on variations or clarification regarding the furniture and materials shown should be sought from the Streetscene Review Panel before use.

6.1 VERTICAL ELEMENTS:

All furniture should be arranged or grouped in a consistent way to create clear unimpeded routes. Any new column should be erected in line with the boundary of the property to avoid obstruction to doors and windows. The arrangement of furniture should ensure that the unobstructed footway is minimum 2500mm in 'Place' categories A-B, 2000mm in 'Place' category C and 1500mm in 'Place' categories D-E where physically possible.²² Where minimum footway widths cannot be achieved between furniture then a 150mm white visibility band must be included on all bins, poles and bollards. In special circumstances (e.g. historically important places or features) further consultation may be necessary.

The London Borough of Hounslow standard range of furniture will be used in all areas unless otherwise stated. The colour of all street furniture should be Black, RAL No. 9005, (with the exception of natural wood) unless there is an opportunity to use good quality austenitic stainless steel, particularly in conservation areas or areas of special distinctiveness. All vertical street furniture should also be located to back or front of the footway in first instance, to maximise clear zones and open up the relationship between footway and carriageway.

6.1.1 ADVERTISING SIGNS AND A-BOARDS

Encroachments into the public highway by advertising signs such as awnings, banners, barriers, and planters should not be permitted without good reason. Refer to council policy on this.

All advertising signs and A-boards on the public highway are subject to enforcements, planning permission or business regulations

6.1.2 BESPOKE FURNITURE

The use of bespoke furniture and materials would form part of the enhanced palette and may be limited to high profile and intensively used locations or locations that form part of the Community streets programme. Bespoke items can significantly enhance the character of a locality but can also make future maintenance and replacement challenging. It is vital that proposed items are approved by those who will maintain them and that the specification and manufacturer's details are provided to the Council's maintenance professionals to allow them to re-order and re-supply.

6.1.3 BINS

For the approved bin types please refer to the street furniture checklist in Appendix D

6.1.4 BINS (RECYCLING)

For the approved recycling bin types please refer to the street furniture checklist in Appendix D.

6.1.5 BOLLARDS

There should be a presumption in favour of using alternatives to bollards where possible. Alternatives include raising kerb heights, reinforcing construction to resist over-run, using other street furniture, using trees or more enforcement of parking restrictions. In all areas bollards should be used as a last resort.

There are a number of locations with distinctive bollards in the Borough which should be treated as an asset to be retained and refurbished, as in Hounslow Town Centre, Barley Mo Passage, Isleworth Lower Square and The Butts, Brentford.

Cast (usually iron) bollards should not be removed without checking whether they are historic or part of a special character. Many are of distinctive pattern which should be treated as assets, particularly in conservation areas or areas of special distinctiveness.

Bell bollards should only be used as a last resort where the safety risk from overrunning vehicles cannot be mitigated by other means and where a minimum footway width of 1500mm can still be achieved.

For the approved bollard types please refer to the street furniture checklist in Appendix D.

6.1.6 BOLLARDS ON REFUGE ISLANDS (REFLECTIVE OR ILLUMINATED)

For the approved refuge bollard types please refer to the street furniture checklist in Appendix D and 6.1.23 for guidance on Traffic and Road Signs.

6.1.7 BOUNDARY RAILINGS

Low timber post knee rails or timber bollards may be used as a boundary around open spaces and grass verges where vehicle over-run is an issue. Where appropriate, the use of double height kerbs to protect verges may be used. Historic railings should be retained and restored where possible. There are occasionally opportunities to install new railings in a historic pattern. Metal railings should always be painted in Black, RAL No. 9005.

For the approved boundary railing types please refer to the street furniture checklist in Appendix D.

²² Department for Transport - Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure

(2002)

6.1.8 BUS SHELTERS

The London Borough of Hounslow will encourage Transport for London and their suppliers to install and maintain bus shelters that are appropriate to individual sites. The aim should be to provide a shelter at every site where significant numbers of people wait to catch a bus - in this context significant could be regarded as more than 50 people per day. As most busy bus stops already have shelters, generally relatively new and/or in good condition, the selection of shelters for new sites should take into account the style of adjacent shelters and the character of the area, with the aim of creating a consistent “run” of shelters along a given bus route or arterial road. The length of shelters may be expected to vary with the number of people at each stop but the style should be consistent.

Shelters should generally face the carriageway and provide a clear view of approaching buses for passengers waiting in the shelters. Shelters must be positioned to avoid obstruction to passengers boarding and alighting from buses, and in particular wheelchair passengers using the centre door of the bus.

Shelters within the boarding and alighting zone must therefore be set back at least 2.7m from back of shelter to the kerb line²³. If there is insufficient footway space to allow this, the shelter should be located outside the boarding zone - mainly immediately downstream from the stop.

Care must also be taken to ensure that shelters do not obstruct footways. There should be at least 1.5m behind the shelter, if mounted “centre of footway” or 2.5m if mounted at the rear of the footway. These clear dimensions should be increased on busy streets and in particular in town centres. The effect on historic boundaries and listed buildings should be considered.

If there is insufficient width for shelters to face the carriageway, they may be mounted facing away from the carriageway, in which case the rear of the shelter must be at least 0.5m from the kerb line and the shelter must be located immediately “downstream” of the boarding and alighting area.

Shelters may have end panels, which provide protection from wind and rain, but if such panels obstruct the footway then the end panels should be omitted.

Seating should be provided within shelters, except where it is established that the provision of seats has undesirable consequences in terms of encouraging non-bus passengers to congregate or loiter. Seating should be durable and “minimal” in style, in order to discourage loitering. “Perch” type seating is permissible where bus frequencies are high.

Advertising will continue to be permitted on bus shelters, in end panels and preferably rear panels, except in ‘Areas of Distinctiveness’ or areas of advertising control. Any advertising needs to comply with statutory requirements.

Advertising panels may be internally illuminated, but moving, rotating, flashing, pulsating or video-style advertising displays will not be permitted. No sound output from advertising panels will be permitted.

Accessible bus stops should be accessible to all users in accordance with TfL guidance.

6.1.9 CCTV

Consideration should always be given to utilising lamp columns for mounting portable cameras. Where new lighting is proposed and portable cameras are likely to be installed in the future strengthened columns (with a thicker shaft) must be specified.

Any new CCTV installations should ensure optimum line of sight is achieved so that only a minimum number of cameras are required. Locations of columns should not create additional clutter within the street or obstruct the movement of pedestrians.

New column installations in areas of distinctiveness are likely to be sensitive and locations must be referred back to planning / conservation officers for consultation.

6.1.10 CYCLE STANDS

Where possible, cycle stands should be placed at entrances to pedestrian zones or at nodal points where cycle usage is anticipated. They should be grouped rather than placed in isolation and ensure adequate footway clearance widths are allowed for when cycle stands are full of parked bikes.

Cycle shelters where room permits and demand warrants should be considered.

For the approved cycle stand types please refer to the street furniture checklist in Appendix D.

6.1.11 ELECTRIC VEHICLE CHARGING POINTS

Provision of public charging facilities is an important element for overcoming barriers to the uptake of electric vehicles. Most of the charging points will be located in off-street parking spaces, however some may be required on-street, particularly where demand for electric vehicles is high from local residents but no off-street parking provision is available to them,

This guide will be updated regularly to ensure it is consistent with the latest requirements for charging points on the public highway.

6.1.12 GRASS VERGES

In many cases pavement verges are a record of the history of the street which should be retained. Existing verges are either grassed or hard surfaced. Many of the hard surfaced verges are thought to have been converted from grass verges over the last 70 years or so to deal with the enormous increase in road traffic over this period. Existing grass verges should be retained and protected, they may be enhanced by trees, seasonal bulbs, or in some cases shrub planting, so as to increase their perceived value and safeguard their long term future. Existing hard surfaced verges may in some cases be returned to grass.

6.1.13 GUARD RAILS

The presumption by the Council should always be to use a pedestrian barrier solely on maintaining or improving safety. Design teams should question the need for guardrails and remove any that cannot be shown to be needed to maintain pedestrian

safety²⁴. A GRAF (Guard Rail Assessment Form) audit must be carried out prior to any removal and its recommendations agreed with the Head of Traffic & Road Safety.

Consider use of cycle parking where guard rails are removed as they are often used as informal cycle parking.

For the approved guard rail types please refer to the street furniture checklist in Appendix D.

must be resistant to abuse from vandals.

Signs in 'Heritage' styles should be avoided where their design compromises the clarity of the information on them e.g. gold text on black.

Historic or significant finger posts should not be removed, even if they need to be duplicated or repeated (assuming no conflict of information).

Transport for London has also developed a comprehensive way-finding system for pedestrians in town centres called 'Legible London'. The system uses a well-researched and clear methodology to present directional information with a number of different 'products' available. These include free standing plinths, traditional finger posts and branded posters for display in public transport interchanges.

Legible London is currently in the process of being rolled out across London and the authority is keen to support its introduction into the Borough. Future signage proposals should consider whether an area wide Legible London approach is appropriate, particularly in 'Place Status category' of A, B or C.

For the approved pedestrian signage types please refer to the street furniture checklist in Appendix D.

6.1.14 LIGHTING

The contrast between standardised highways lighting and lighting for the Streetscene should be recognised, and where practical light sources may be encouraged to emphasize the pedestrian context and encourage use of streets at night. The design of the lighting should integrate with the surrounding buildings and public space, e.g. highlighting and up lighting of trees, features and landmarks.

All lighting needs to meet the latest British and European street lighting standards. Consideration should always be given to utilising lamp columns for mounting other street furniture to reduce street clutter. Where the need for additional loading capacity has been identified on lighting, e.g. for the purpose of accommodating banners, hanging baskets, larger signs or mobile telephone aerials, strengthened columns (with a thicker shaft) must be specified.

Historic lighting should be restored wherever possible and any new lighting columns and luminaires should be designed to a high standard using flanged mounted root lighting columns that save on root and pavement reinstatement costs.

Where non-standard street-lighting fixings are provided the location must be recorded for the Asset Register.

All bespoke highways lighting or feature lighting for 'Areas of Distinctiveness' should be of a high quality modern design and not imitation historical models, unless part of existing run or otherwise agreed.

The design and specifications set out here are only to be used as a guide. For all new lighting to be installed on the highway or to be adopted the final solution in respect to lanterns, standards and activation levels must meet the PFI output specification detailed in schedule 3 of the PFI contract documents and be agreed with the Streetscene Review Panel.

Where non-standard street-lighting fixings are provided, details and the location must be recorded for the Asset Register.

For the approved lighting types please refer to the street furniture checklist in Appendix D.

6.1.15 PEDESTRIAN FINGER POST AND INFORMATION SIGNS

Design of signage must be coordinated to ensure the information is concise. Signs should where possible use one post and be located at key movement nodes.

Finger Posts should only be located where a clear need for directional information is identified. The design of finger posts

6.1.16 PERIOD FEATURES & PUBLIC ART

The Council should seek to retain and repair historical street furniture or surfacing in its original location. To achieve this, it may be appropriate in some circumstances cleanse and re-settle features. If such repair is deemed necessary the planning department / conservation officer should be consulted as some are listed and work may need consents.

Original period features include street furniture such as lighting columns, bollards, covers and gratings, signposts and railings, and surfacing such as kerbs, milestones, channels, setts, brick or cobbling, war memorials. Non-standard Victorian stink/vent pipes present on the network should be preserved. They are however a third party assets and their maintenance is not included as part of the contract. Non-standard stone kerbs, setts or metal edges and flush edges may occur in historic and other special areas. Public art may include statues, abstract objects, mosaics or murals. All these should be deemed of 'special character' and maintained like-for-like unless otherwise negotiated.

6.1.17 RAISED PLANTERS

Raised beds provide protection and a means of getting trees and shrubs into areas where there is insufficient depth available otherwise. Planters can provide high quality architectural detailing and sculptural elements if appropriate to their setting. Poorly located planters can clutter pavements, restrict passing widths and interrupt pedestrian movement. New planters must be limited to locations where there will be a retained clear pavement width of at least 2m. Planters may be used on the carriageway in some circumstances, particularly as part of traffic calming scheme to reduce speeds (these often form part of a Community Street scheme).

²⁴ TFL Streetscape Guidance 2009 - Technical Guidance 8.24

Raised planters should have adequate drainage with consideration for the sub-base and its drainage capability.

Irrigation / maintenance costs should always be considered before installing planters. In some locations community ownership and management of planters could be considered.

6.1.18 SEATING

Accommodating additional seating will be a priority across all areas of the Borough to provide rest points for pedestrians and where people congregate, such as local shops and schools. All new seating will be located where there is good lighting and natural surveillance and where congregating people will not cause a nuisance to adjacent properties or reduce security. Consultation may be required for new facilities

When specifying a new memorial bench one of the 2 standard styles of seats will be specified together with an engraved metal plaque fixed centrally to the back of the seat. Where an existing seat already exists in the location of a proposed memorial bench it may be appropriate to renovate the existing seat instead of procuring a new one and fixing a new engraved metal plaque.

For the approved seating types please refer to the street furniture checklist in Appendix D

6.1.19 SHRUB PLANTING

All planting schemes should have a well-defined maintenance regime in accordance with schedule 3 of the PFI document Output Specification.. They should incorporate seasonal variety in their selection of plants and native species, of local provenance where feasible, to reflect and enhance the adjacent habitat in accordance with the Council's Biodiversity Action Plan.²⁵

There should be a presumption in favour of low maintenance species. Species should be of appropriate size when mature so as not to require regular pruning. Over-growth can significantly restrict footway widths and should be a consideration when locating planting.

Shrub planting must be located to avoid creating CCTV 'blind spots' and areas of poor surveillance that may facilitate criminal activity.

The use of ground covers and shrub species with dense growth down to the ground should be assessed on a site by site basis. Where there is a significant risk of litter dumping or collection of litter and infestation they should be avoided.

Where practical, there should be a presumption in favour of retaining hedges and hedgerows with their removal being an absolute last resort. Alternatives may include partial removal, cutting to reduce height or replanting them in a more appropriate location. Where applicable, it is preferable that hedges or hedgerows that have been removed are replaced with new hedges or hedgerow planting. Care should be taken to mitigate any environmental impact resulting from hedgerow removal and an ecological impact assessment is likely to be required

There is quite a wide palette that could be used but the seven most used species are;

- Cotoneaster Coral Beauty
- Cotoneaster Skogholm
- Symphoricarpus Hancock
- Lonicera Pileata
- Euonymus Emerald Gaiety
- Viburnum Tinus
- Lavender (species)

Also the recommended hedging species would be;

- Lauraceae Laurel
- Carpinus Hornbeam
- Crataegus Hawthorn

Some areas we also have Privet and Pyracantha. Although dead plants are replaced with the same variety for continuity, these should not be used for new scheme as privet grows too quickly and Pyracantha has large spikes.

6.1.20 STREET NAME SIGNS

Wherever possible, street name plates and signs should be positioned at the rear of footways in a location that can easily be seen by vehicle users with minimal obstruction. There shall be at least one street name plates on each road. Existing name plate locations if suitable shall be retained.

Historic street name plates should be renovated rather than replaced to ensure that the history of the Borough's Streetscene is protected and that a stronger sense of place evolves over time. Historic or significant wall-mounted street signs should not be removed.

6.1.21 TELEPHONE KIOSKS AND PUBLIC AMENITIES

Public amenities should be placed where they do not restrict movement on the pavement. They should be placed parallel to the kerb, preferably to the back edge of footway and conveniently located. Market stalls should have clearly defined pitches, delineated on the ground with metal studs or subtle painted lines to ensure they don't obstruct the pavement.

6.1.22 TRAFFIC SIGNALS AND CONTROL CABINETS

Where practical traffic signal equipment should be integrated within surrounding street furniture and the number of signal heads and individual aspects kept to a minimum. Cabinets should be located flush against a back wall on the Streetscene to avoid creating areas of poor accessibility for maintenance vehicles or manual cleaners.

Longer term aims should be to lobby utility companies to design their cabinets to discourage fly-posting and to share cabinets with other utilities to avoid multiple cabinets in high profile locations.

6.1.23 TRAFFIC AND ROAD SIGNS

The provision and size of signs on the project network should be kept to a minimum and the need to maintain existing signs should be considered when implementing schemes on the project network.

Warning and 'give way' signs may be unnecessary in areas where vehicle speeds are low, and 'No waiting at any time' signs are no longer required by regulations. Backing boards are not to be used

²⁵ Hounslow Local Biodiversity Action Plan 2003

without the approval of the SDG panel.

All traffic signage should be in accordance with 'the Checklist of Borough Traffic and Sign Variations' in Appendix C. All other signage should be in accordance with the Traffic and Signs Regulations and General Directions 2002. Understanding of the regulatory and directional content of this document is required.

As outlined in Manual for Streets, the Traffic Signs Manual and other Local Traffic Notes are advisory documents. The flexibility in both documents should be used to rationalise signing and use other techniques to achieve the same result where possible.

Departure from these standards can be agreed with the Department for Transport (DfT), such as the authorisation obtained for the use of reflective and non-illuminated keep left bollards for traffic islands.

This is also particularly relevant in the 'Areas of Distinctiveness' as highlighted in the Traffic Advisory Leaflet 1/96, Traffic Management in Historic Areas, and Traffic Advisory Leaflets on Historic Core Zones.

6.1.24 TREES (PROPOSED)

The provision of trees is a priority across all 'Place' categories A-E. Street trees are an essential element of the Streetscene lending a particular character to an individual road or neighbourhood and raising an area's 'livability'.

In 'Areas of Distinctiveness' Y and Z a higher proportion of tree and shrub planting may be appropriate on the footway, where space allows.

The choice of street tree species shall be agreed in consultation with the Highways Maintenance PFI Contractor. The selection of tree species must consider the following:

- Impact on the maintenance of the Streetscene. (Fruits, thorns, thrown branches, high water demand or aggressive rooting characteristics may be problematic.)
- Pruning requirements of tree (branches that overhang and obstruct pedestrians or vehicle movement will be removed).
- Trees shall not be planted where they will unreasonably reduce pavement width and obstruct movement of pedestrians, wheelchair and mobility scooter users and parents with pushchairs.
- Larger structural tree species are generally preferred rather than smaller short lived species.
- New schemes should be designed to anticipate the future space that these trees will require.
- The location of trees should not interfere with street lights, telegraph pole wires, road signs and other equipment, such as "pay & display" machines, cycle stands and bus shelters.
- Trees will not be planted in, or near, off-carriageway cycle lanes
- Trees shall not stand directly before windows, doorways or

other access points such as driveways or garages.

- Trees shall not conflict with underground services or structures. (Obtain detailed information on soil condition and underground structures and services before planting).
- Trees shall not obstruct views for pedestrians or drivers at junctions.
- The minimum spacing of street trees shall generally be no less than 8m apart, but the exact spacing will be determined by local underground services, street conditions and the mature canopy spread of the species selected. All trees shall be planted in long narrow trenches parallel to the street to alleviate problems with roots penetrating the footway and damaging the surface. Vertical and horizontal root barriers will be specified to avoid damage to pavements, nearby low structures or adjacent services. Root protection measures shall be assessed on a tree by tree basis. It is important to ensure that the depth of the barrier is sufficient to deflect root growth to such an extent that they will not simply grow under the barrier and resurface.²⁶
- Street trees will require a specialist contractor to provide maintenance services and a planned watering and maintenance approach must be adopted for 3 years for all newly planted trees. Regular maintenance of tree pits is also essential.
- Drainage and pavement falls around the tree shall ensure that saline run off from the road in winter months does not kill the trees.
- All tree pit designs shall meet the requirements of the Highway Maintenance PFI Contract specifications and include a fertile growing medium, irrigation/aeration system, tree guying and a maximum possible tree pit size for the proposed tree size.
- Wherever possible, newly planted trees should be large enough to avoid the need for tree guards, e.g. Extra Heavy Standard.
- Trees should not be planted where the footway width would be reduced to less than 1500mm after installation of the tree pit. In these cases the Council will encourage opportunities for tree planting within a footway build-outs.
- In some street locations, trees planted in private property or within park boundaries may have particular importance, due to the space available to accommodate them. The Council will encourage opportunities for tree planting on private land in these situations and ensure existing trees are protected with Tree Preservation Orders if necessary.

The preferred trees would be narrow crowned, the species mainly used in Hounslow are;

- Malus (species) Apple
- Prunus (species) Cherry
- Carpinus Hornbeam

²⁶ John Roberts, Nick Jackson & Mark Smith, Department for Communities and Local Government, 2006

- Acer (species) Maple
- Tilia Lime
- Platanus London Plane
- Crataegus Hawthorn

6.1.25 TREES (EXISTING)

Existing trees should be protected from service excavations, road resurfacing, kerb repair work and salt gritting, with work in their vicinity carried out in compliance with British Standard 5837:2012, and the recommendations of the National Joint Utilities Group: 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'²⁷.

Where existing roots are causing damage to the footway, paving can be removed and either reinstated at a raised level or replaced with flexible materials such as black top or compacted gravel in the affected area. An assessment of the value of the tree can also be undertaken with specialist arboricultural officer of the Highway Maintenance PFI Contractor looking at amenity, condition and remaining life of the tree and consideration given to the value of maintaining such tree versus replacing it with new one(s). Safety and integrity of the PN for the users must always take priority when considering the appropriate course of action.

In some cases if a tree is removed the same or similar species is used to replace it. This would be for the continuity of an Avenue or a Vista, such as London Planes and Limes in Chiswick, however some species may not be returned to the same area as they are unsuitable for the highway such as Ash and some Apple species amongst many others as they cause subsequent damage to the footway and carriageway.

6.2 PAVING ELEMENTS

6.2.1 ACCESS TO BUILDING AND STREET FRONTAGES

In all street improvement projects the footway should be laid flush with the entrance to all retail, commercial or civic premises leading from the street. Where this is not feasible internal alterations to premises should be allowed for and agreed.

Ramps, permanent and temporary, provide for disabled access to the property and help achieve the aims of the Equalities Act. However, they should be installed in a way that does not obstruct movement on the footway or cause a trip hazard

6.2.2 BUILD OUTS

A build-out is the narrowing of an existing road profile by increasing the width of footway to slow vehicles, improve the amenity of pedestrians, accommodate tree planting or segregate parking.

They should form a natural continuation of the street with paving running continuously from the original footway into the build-out and should only be designed where adequate drainage levels can be accommodated.

Large build-outs should be landscaped with strategically sited trees and, where possible, new seating, cycle parking and lighting.

When renewing or introducing new build outs (and pedestrian refuges at uncontrolled or controlled crossings) an assessment of the impact they may have on cyclists through creation of a pinch points will be undertaken. Pinch points such as traffic islands often create 'critical lane widths' of 3 - 4.4 metres where drivers may try to overtake cyclists at dangerously close proximity. These are some of the most disliked features of the roads by cyclists. The preferred solution is to remove the pinch point (e.g. replace pedestrian refuges with straight across zebra or pelican crossings) or, failing that, increase the lane width to metres (4.1-4.4 may be acceptable in low speed areas), where safe overtaking is possible. Where these preferred solutions are not possible and traffic speeds are around 20mph, or traffic calming can be introduced to lower speeds to 20mph, the lane width should be reduced to 3m so drivers cannot overtake at the pinch point.

6.2.3 CARRIAGEWAY SURFACING FOR CYCLES AND BUSES

Due to their high cost and low durability DfT and TfL have both in recent times recommended that coloured surfacing be used sensitively and sparingly. As such the use of coloured surfacing on the project Network is discouraged and its use will be treated as a departure from the guidance and require approval from the SDG panel. Coloured surfacing will also not be re-provided as a matter of course following carriageway resurfacing.

In 'Areas of Distinctiveness' coloured markings should not be used unless approved by the 'Streetscene Review Panel'. In these situations black top surfacing in conjunction with cycle or bus logos and appropriate lane markings are sufficient. For cycle lanes different surfacing materials and detailing such as borders to paving should be used to enhance guidance to cyclists and others as an alternative to signage.

Line marking symbols should be sensitively used, enough to clearly show a route, but not to be unacceptably dominant within the townscape.

6.2.4 CARRIAGEWAY MARKINGS

All carriageway markings should be in accordance with 'the Checklist of Borough Traffic and Sign Variations' in Appendix C. All other markings should conform to the Traffic and Signs Regulations and General Directions 2002 and the Traffic Signs Manual. Understanding of the regulatory and directional content of this document is required.

6.2.5 DRAINAGE

Weir gullies are preferable in the carriageway on cycling routes and everywhere in 'Link' status 1 and 2 where there is major reconstruction. Weir gullies are also recommended in area with extensive leaf fall.

Special attention should be given to providing adequate drainage where there are traffic calming features such as side road entry treatments and where the footway is being extended into the carriageway.

The use of footway drainage systems should be avoided wherever possible with run off drained by means of a simple cross-fall across the footway. Where drainage is required on footway open drain channel are preferable to slot drains or grilles on all wide

²⁷ NJUG 10, 1995.

footways.

All gullies in the carriageway and footway must be connected to the main sewer. In locations where this is not possible, the use of soakaways may be appropriate.

6.2.6 DROPPED KERBS / TACTILE AND CROSSOVERS

Department for Transport Guidance on the use of Tactile Paving Surfaces and the Royal National Institute for the Blind's Sign Design Guide³⁷ should be referred to each time work is undertaken to change the Streetscene. For avoidance of doubt unobstructed access for those with mobility impairments (particular those in wheelchairs or mobility scooters), in the form of drop kerbs or raised tables/entry treatments, will need to be provided across all junctions and side roads.

It is important to balance the use of tactile paving between benefits to the blind and discomfort to pedestrians with other physical disabilities. Tactile paving for cycle paths and steps should be used sparingly with the design simplified or reduced to avoid complexity.

Generally red tactile paving should be used at all controlled crossings and buff tactile paving at all uncontrolled crossings. Tactile paving matching the main paving material may be permissible in areas of distinctiveness or immediately adjacent to important listed buildings where a very strong design case can be made. (refer to Chapter 4). The use of steel studs to create tactile surface is not endorsed.

Drop kerbs for pedestrian access must be surrounded by level pavements and have a clean, straight-edged construction. They should not exceed a gradient of 1 in 12 and have genuinely flush kerbs level with the road surface.

At vehicle crossovers an up stand of 25mm must be maintained between the carriageway and the ramp to ensure linearity if drainage is maintained along the kerb edge. Once the crossover reaches footway level then a genuinely flush surface should be maintained.

6.2.7 FOOTWAY MATERIALS

Footway surfacing materials are categorised under the four Link and Place bands outlined in Chapter 4 and include:

Bands 1, 2 and 3 White footways:

- 'Grey' pre-cast concrete modular paving (400*400*63mm) is the preferred material. Slabs are to be laid perpendicular to the carriageway with a 200mm bond. Concrete bedding should be used where occasional vehicle over-run is anticipated. Edging kerbs are also to be provided where the paving meets a soft verge to eliminate lateral movement.
- ASP or concrete flags (600/450*600*63mm) could also be used when needed for aesthetic or technical reasons. These should not be used in areas where vehicle overrun is anticipated. Edging kerbs will not be necessary due to the added stability of these larger slabs. Slabs are to be laid perpendicular to the carriageway with a minimum 150mm bond.
- Apart from exceptional situation such as within recessed cover, no more than one cut per slab will be allowed and preference should be given to minimise flag cutting.

- For changes in paving directions, slabs should be cut with reduced units used earlier in the bond to get the best cuts.
- Grey concrete paving blocks (200*100*63mm) are to be used for private crossovers, tight junction corners, footway parking and where frequent vehicle over-run is expected.

Band 4, Black/Asphalt footways:

- 25mm 45/6HRA bin100/150 is the chosen material for both footways and private crossovers in this band.

Yorkstone may be used on streets within Conservation Areas and may be used in 'Areas of Distinctiveness' across all bands as defined in chapter 4. Diamond sawn is the preferred finish for most streets. Where practical the Council will endeavour to retain all existing areas of Yorkstone. Silver grey paving slab may be used where there is a potential for variation within these areas. In new works the mixing of concrete flags and black-top should be avoided.

In all bands, traditional colour Tegula sett paving should be used for raised entry treatments, other coloured concrete sett paving can be used for detailing where applicable, such as shared footway parking and shared surfaces in distinctive areas but will require approval from the SDG panel.

The palette of materials in Appendix E has been selected to reflect the consistent approach to the quality of materials used on the highway network within the London Borough of Hounslow. They are intended to guide designers rather than specify particular products. This will allow choice where there is a potential for variation to reflect local character or for use in 'Areas of Distinctiveness'. Any changes and variations should be discussed and agreed with the Streetscene Review Panel.

The above is to be used as a guidance and The Council reserves the right to maintain any footway paving as like for like material.

6.2.8 KERBS

Kerb materials are categorised under the four link and place bands outlined in Chapter 4 and include:

- Granite kerbs as the material of choice for band 1, 2 and 3 and 'areas of distinctiveness'. Concrete kerbs with recycled aggregate are also acceptable in these areas subject to approval; and
- Grey concrete kerb for band 4.

Like-for-like replacement of kerb materials is acceptable for maintenance works. Kerb heights should be maintained by removing old surfacing or raising the kerbs before applying a new surface. If this is not done, kerb heights will be reduced over time with successive layers overlaid on top of each other encouraging vehicle over-run.

A minimum of 110mm should be used as a typical kerb height, with 150mm used where vehicle over-run is an issue.

An increased kerb height at bus stops should be provided for accessibility requirements and be in line with TfL Guidance.

Kerb Type	Kerb Height Range	Notes
New Kerbs	110-150mm	150mm used where there are vehicle over-run issues
Retain existing kerb & resurface carriageway (Unprotected Footway)	Min 75mm	Kerb height adjustments required if less than minimum height
Retain existing kerb & resurface carriageway (Protected Footway)	Min 30mm	Kerb height adjustments required if less than minimum height
Standard kerb at bus stop	125-140mm	In accordance with TfL guidance
Special kerb at bus stop	160-220mm	In accordance with TfL guidance
Pedestrian Crossing Point	Flush	
Vehicle Crossover	25mm	
Footway Parking	50mm	Separation between footway parking-space and rest of footway area.

Kerbing width and length should be maintained to tie up with the remainder of the street. Minimum kerb length cut to be 400mm.

The above is to be used as a guidance and The Council reserves the right to maintain any kerbs paving as like for like material.

6.2.9 PARKING AND SERVICING

For on street parking, the bays shall be of similar surface as the carriageway.

For footway parking, the surfacing material should be:

- concrete sett paving or reinforced concrete flags in band 1, 2 and 3; or
- Bitmac in band 4.

Road marking associated with Control Parking Zones should be in accordance with the legislation for enforcement. For areas of uncontrolled parking, use of subtle delineation such as difference of materials shall be promoted for footway parking bays.

6.2.10 PUBLIC / PRIVATE OWNERSHIP

Where the area in front of buildings is in private ownership, the London Borough of Hounslow will encourage the cooperation of private owners to remove obstructions and match paving surfaces. Any required delineation can be set out with brass or

steel studs or strips. This also applies to the street interfaces with adjacent Borough and TLRN roads

This will improve and unify the appearance of the street, and provide the best route for the visually impaired to walk using the continuous building façade as a guide.

6.2.11 RAISED ENTRY TREATMENTS

Raised entry treatments are raised speed tables at side road entries with a ramp on each side of a flat “table” section raised flush with the height of the footway. They extend fully across the carriageway so they merge flush with the kerb to provide a level crossing point for pedestrians. Where the cross camber of the

side road is pronounced, the table section may need to rise slightly towards the middle of the carriageway.

Raised entry treatments should consist of four granite bars, laid flush with the treatment and delineating the top and bottom of the ramps. The top bars should be parallel and should align with the alignment of the footway on the main road. The bottom bar nearest the main road should be parallel to that road, while the opposite bottom bar should generally run perpendicular to the side road, which means that in some cases the ramp section furthest from the main road will be asymmetrical.

The table of the raised entry treatment should be constructed in traditional coloured Tegula paving 80mm thick, using 240mm and 160mm gauge laid parallel with the main road. The width of the table should be consistent with the modular width of the sett paving and adjacent tactile paving, in order to avoid cutting the pavers lengthwise. Tactile paving should precisely align with the width of the table (i.e. the inside edges of the top granite bars.) The width of the table (between the granite bars) should therefore normally be 2400mm (equating to 15 rows of sett paving and 6 rows of 400mm tactile paving). Where appropriate, table widths of 1600mm and 3200mm may be used.

Asphalt should not be used for the table section of raised entry treatments and raised entry treatments constructed entirely of asphalt “humps” are not permitted.

The gradient of the ramps may vary according to circumstances including the nature and importance of the side road. The maximum gradient should not generally be more than 1:12, with a minimum 1:15 desirable where traffic flows into and out of the side road are significant and or where buses use the ramps.

Where the available footway width is limited and the side road has low traffic flows, ramps may be slightly steeper in order to ensure that sufficient width is retained for the table without the treatment being set back from the line of the main road footway, but the maximum gradient should not exceed 1:10.

Drainage must be arranged to ensure that raised entry treatments do not cause water to pond either side of the treatment.

6.2.12 SUDS (SUSTAINABLE URBAN DRAINAGE SYSTEMS)

The use of SUDS is considered a major objective and shall be applied across all streets within the Borough wherever practical and technically feasible.

SUDS design must be integrated into new designs with consideration of maintenance and management responsibilities.

Options for SUDS in the Streetscene include pervious surfaces, soft verges, vegetated areas and soakaways, which can all be designed to promote the infiltration of surface water from the Streetscene into the ground.

Although the Authority does not require discharge consents for highway runoff either to surface waters or to ground water it has a responsibility to ensure that discharges do not cause pollution and agreement should be reached with the Environment Agency before agreeing to discharge water into surface or under-ground water course.

Refer to the guidance on SUDS contained in the Interim Code of Practice for Sustainable Urban Drainage Systems, Part H of the Building Regulations and Sewers for Adoption²⁸

6.2.13 TRAFFIC CALMING

The current Mayors Transport Strategy (2010) is clear that highway authorities in the capital should investigate alternatives to achieve slower traffic speeds without resorting to vertical deflections where possible. This formed the impetus for the development of the Community Streets programme.

Kerb build-outs and chicanes should relate in design and materials to the overall built environment setting and Streetscene, keeping road markings to a minimum. Existing kerb lines should not be retained in their existing position but realigned to the new build out.

Black-top should be used to form all traffic calming ramps including flat top ramps. Speed cushions on bus routes, constructed in asphalt rather than the concrete form, shall be used.

In almost all case a sinusoidal design for road humps will be required to minimise impact on ride quality of cycles.

6.2.14 TREE PIT SURFACING

The choice of surfacing materials in tree pits will depend on a number of factors such as location, footway width, footfall, type and maturity of tree.

The preference should be for permeable and flexible surfacing material to allow water to penetrate and be able to adjust to future roots growth.

The use of resin bound gravel should be avoided due to the lack of flexibility and skid resistance when wet of that material. Asphalt can be used in residential areas to maintain a safe and walkable surface where footway width is limited however its use would need to be agreed by the SDG review panel in Bands 1, 2, and 3 where white footways are to be provided.

Tree grilles should be avoided as they are difficult to clean out can become a trip hazard when raised by roots. Avoid the use above ground staking, which clutter the street and detract from the tree planting. Use underground guying instead but if stakes are the only option they must be removed after a maximum of 3 years.

The treatment used should be consistent along the entire street and judged on a site by site basis.

6.2.15 UTILITY COVERS

The use of inset covers will be encouraged in all 'Areas of Distinctiveness' and within areas of tactile surfaces to help hide the presence of inspection covers and achieves greater consistency of footway. Standard ductile iron covers with a vehicle loading specification should be generally used.

Where possible covers should be laid square to the pavement coursing to improve appearance and limit the infill required around edges. Attention should always be given to the detailing around covers, which can have a considerable effect on the safety and appearance of the footway. At junctions or crossings (controlled or uncontrolled) covers with appropriate tactile finish are required.

Covers should be labeled to identify the relevant utility.

6.2.16 VEHICLE OVER-RUN

In locations where there is a high chance of vehicle over-run, base footway construction should be strengthen, standard concrete flags should be replaced with concrete block paving, or with rigid construction where heavy vehicle parking/overrun is anticipated (e.g. industrial estate roads).

6.2.17 VEHICLE CROSSOVERS

Crossovers should be designed with the minimal number of materials used and retaining the maximum width of flush walking surface for pedestrians. Crossover materials should be limited to:

- For domestic crossovers in band 1, 2 and 3, the surface material shall be grey concrete block paving laid in herringbone pattern.
- For crossover in band 4, the surface shall be in Bitmac.
- Mixing concrete flags and black-top should be avoided. The use of materials used should be consistent along the length of the street. Crossovers that would involve the loss of a tree will also not be allowed.
- Crossover construction should be as per the standard details defined in Appendix B.

²⁸ <http://www.ciria.com/suds/>

7 MAINTENANCE

All Streetscene projects when completed simultaneously through the 5 year CIP, or the Accrual Process Schedule 14, or the Change Protocol Schedule 15 shall be included into the maintenance regime of the Highway Maintenance PFI Contract, and receive both Lifecycle Investment and maintenance at the optimal point of repair up to 31st Dec 2037 with sufficient residual life under the Handback criteria.

The maintenance regime is captured within the Highways Maintenance PFI Contract through the 3 key elements to the performance regime which are the Output Specification, Performance Monitoring regime and the Payment Mechanism.

The regime addresses the maintenance of the following services:

- Routine (reactive and cyclic), preventative planned maintenance of the PN and associated infrastructure assets.
- Horticultural maintenance
- Tree management and maintenance
- Weed control
- Winter operations
- Emergency responsiveness
- Inspections, surveys and enforcement

To ensure that an improved Streetscene is maintained after implementation, there is a fundamental need for better coordination between Council departments, contractors, public utilities and developers. This Guide aims to set in place the mechanism to build these new relationships and establish new partnerships. Coordination must be achieved by agreement and by working towards common goals.

7.1 REINSTATEMENT OF SURFACES

Surfaces should be quickly and effectively restored to the original standard under the 'New Roads and Street Works Act 1991', as soon as the necessary works have been carried out.

It is preferable that ducting is provided by Utility Companies in new works or alterations in new works to minimise future disruption to well established surfaces.

For maintenance of footways black top should only be used to match existing areas of tarmac / macadam paving of for footways in Link & Place Band 4. Refer to 6.2.7 for more detail on footway surfaces.

The replacement of damaged kerbing or existing kerbing should be carried out like for like. Existing granite kerbing should be retained and re-used and not replaced with concrete. In stretches of predominantly granite kerbing patched with concrete kerbing, the opportunity may be taken in future works to replace the concrete kerbing with granite ones, sourcing recycled granite kerbs wherever possible. Refer to 6.2.10 for detail on kerbs

Any patching to coloured carriageway surfacing such as bus bays/lane or cycle lanes should be replaced like for like. Refer to 6.2.3 for more detail on reinstatement on bus bays & cycle lane surfacing as part of larger maintenance scheme.

Patching means an inlay replacement of defective flexible material or a reinstatement following the activities of statutory undertakers' operation to any depth but not less than the wearing course thickness

to affect a permanent restoration of the stability and/or the riding quality of the surface.

If the cumulative/collective patching area of a RSL or FSL is greater than 25% of the area to be treated during backlog or Lifecycle investment then the whole surface area shall be resurfaced.

Reinstatement of utility works shall be done in accordance with the specification in Hounslow Highways "Reinstatement of Openings" strategy documents.

7.2 MAINTENANCE OF BESPOKE MATERIALS

For bespoke paving materials and furniture with extended supply times, consideration must be given to future costs of maintenance. It is preferable that bespoke paving materials are limited and only specified where readily obtainable. When specified it is essential that stock is set aside and can be accessed quickly when repairs or replacements are needed. Special dispensations and exclusion from the Project Network might be required to enable the installation of certain bespoke materials when the contract's KPI could be met or when lifecycle calculation are prohibitive for the authority.

7.3 CLEANING

The construction and detailing of all surfaces, particularly areas around and below street furniture must be developed with maintenance operations in mind. Frequency and operations will vary depending on the Place status, such as more frequent cleaning requirements in town centres.

The design of tree pits, utility covers, and sub-bases, bedding layers, materials and joint types must take account of cleaning regimes.

The space and location of street furniture must be developed to avoid creating areas of poor accessibility for maintenance vehicles or manual cleaners.

7.4 CDM AND MAINTENANCE

The construction and detailing of all surfaces and street furniture must have regard to the Health & Safety and CDM Regulations 2015.

7.5 ASSET INVENTORY UPDATE.

Upon completion of a scheme the authority's asset inventory database which is maintained by Hounslow Highways is to be updated with the following details:

- 'as built' drawings, including depths
- the exact materials used
- the names and contact information of all suppliers
- procedures for maintenance works (as appropriate)
- procedures for reinstatement (as appropriate)

7.6 PLANNED MAINTENANCE WORKS

Effort should be made to coordinate capital schemes and the provision of new crossover with planned maintenance works in order to maximize value for money for the authority and reduce disruption to road users.

APPENDIX A: LIST OF CONSULTEES

- LBH Environmental Services and Contract Management Team
- LBH Traffic and Transport Team
- LBH Strategic Planning Team
- LBH Development Control Team
- PFI Service Provider – HHS Ltd
- PFI Contract Operating Company – RHH Ltd