

Highways & Footways Accessibility Guidelines



Department
for Environment
Food & Rural Affairs

MAYOR OF LONDON

**CROSS RIVER
PARTNERSHIP**

DSDHA

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Highways and Footways
Accessibility Guidelines, 2021

This study was commissioned by the Cross River Partnership on behalf of Transport for London’s Central London Sub Regional Transport Partnership. Please contact DSDHA if you would like to request an accessible version of this pdf.

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Brixton BID	Network Rail
Cadogan	Port of London Authority
Camden Town Unlimited BID	Royal Borough of Kensington and Chelsea
Cheapside Business Alliance	South Bank BID
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About Cross River Partnership

Cross River Partnership

Cross River Partnership (CRP) is a sub-regional, public-private partnership that is engaging with People, delivering innovative Projects, and shaping great Places: Delivering London's Future Together. CRP was originally formed to implement cross river infrastructure projects such as the Millennium Bridge and has since diversified to deliver a wide range of environmental, economic and community regeneration projects. CRP's programmes transect themes such as Place Making; Health and Wellbeing; Air Quality; Diversity and Inclusion; Freight, Transport and Active Travel; Energy; Environment; Culture; and Lighting.

Central London Sub Regional Transport Partnership

Cross River Partnership manages the Central London Sub Regional Transport Partnership (CLSRTP) and facilitates the delivery of projects on behalf of Transport for London. CLSRTP is a collective of senior transport officers and directors from ten London boroughs who provide strategic advice for, and on behalf of, Transport for London (TfL). The partnership, which has been active since 2009, acts as a trusted impartial forum for the boroughs to share experiences and enable collaboration on key sub-regional transport priorities, delivering projects, innovative pilots and trials, forward thinking research and strategies.

The ten London borough partners are:

1. City of London Corporation
2. City of Westminster
3. London Borough of Camden
4. London Borough of Hackney
5. London Borough of Islington
6. London Borough of Lambeth
7. London Borough of Lewisham
8. London Borough of Southwark
9. London Borough of Wandsworth
10. Royal Borough of Kensington and Chelsea



About the Authors & Contributors

DSDHA & David Bonnett Associates

The production of this report combines DSDHA's extensive experience in citymaking as a transdisciplinary practice together with DBA's technical expertise on accessibility and inclusive design. Together, the two practices have consolidated in-depth analysis of emerging issues affecting highways and footways, with reference to a range of site complexities, unique attributes and design solutions across boroughs under the Cross River Partnership's (CRP) network.

As two London-based practices with the majority of our work based in the capital, we share the Central London Sub-Regional Transport Partnership's (CLSRTP) ambition of contributing positively towards the creation of fully accessible highways and footways. At DSDHA, our Directors and senior staff members are active on Design Review Panels as members and chairs for Islington, Wandsworth, Lambeth, Southwark and the Royal Borough of Kensington and Chelsea. Our past and current involvement in these areas provides cross-borough knowledge and understanding.

DSDHA have developed a body of research on mobility, transport and spatial justice, through research fellowships with institutions such as the 1851 Royal Commission, and teaching at the London School of Architecture where students explore design solutions to create visions for a fair, just and inclusive city. DSDHA are experienced in designing special educational needs (SEN) schools such as Pond Meadow School and Links Primary School, as well as senior-living accommodation, with planning approval recently granted for a scheme in Belgravia - all requiring sensitive and extensive engagement and consultation to create visions for a fair, just and inclusive city.

David Bonnett Associates is an architectural inclusive design and access consultancy. It provides advice to clients and architects working on projects ranging from cultural venues and landscape schemes to large-scale masterplans, transport interchanges and residential developments. Since the practice was established in 1994 the demand for access has grown, driven partly by legislation and partly by changing social expectations. As recognised experts in the field, DBA contributes to a range of national forums including the Design Council and the British Standards Institute and various LA panels monitoring the quality of design for planning applications. DBA has worked on large urban masterplans and public realm improvements including Oxford Circus, Exchange Square, Nine Elms Park, Covent Garden streetscape works and more recently supporting the inclusive design guides for the Royal Docks.

This report reviews current and past policies and guidelines for London's streets, identifying gaps and latent opportunities for design-led solutions in light of contemporary conditions that have arisen from Covid-19. The demand for green and public spaces has increased over the course of the global pandemic, which itself has exposed challenges and opportunities in sustainability and equity. Although local authorities have stepped up with proactive and experimental temporary solutions to relieve the immediate pressures on highways and footways, these measures need to be analysed and appraised to inform adjustments and long-term solutions.

Executive Summary

Accessible streets, Equitable landscapes

Against the backdrop of the climate emergency, COVID-19 pandemic and the societal awakening to social and mobility injustices, 'Highways and Footways Guidelines' has been developed through agile engagement with the Cross River Partnership team and representatives from local authorities to address accessibility issues – both historic and emerging – that either need renewed attention or guidance where it is lacking. These issues range from broader challenges, such as addressing modal conflict, female safety and devising 24-hour strategies for the public realm, to more specific issues, such as ensuring alternative crossings are safe for all, managing the increase of kerbside activity and designing inclusive cycle infrastructure readdress the issues and barriers faced by underrepresented user groups and those using non-standard cycles.

By 2040, London's population is forecast to be 9.9 million¹ – 900,000 more than today's in 2021. The projected growth, in conjunction with Zero Carbon London targets and Healthy Streets (TfL) ambitions will see a larger modal shift in user behaviours away from cars to active travel. It is essential that London's

highways and footways adapt to these changes to facilitate safe and accessible travel.

As the Department of Transport seeks to amend the code to put pedestrians at the top of a new road hierarchy, having received overwhelmingly positive consultation feedback (December 2021) for the proposed changes, 'Highways and Footways Guidelines' sets out a shared vision for accessibility that exceeds minimum safety standards that is founded upon the belief that no matter what form of mobility we rely on or choose to use, we are all pedestrians and that by enhancing their safety and accessibility, we benefit all users of highways and footways.

Children, the elderly, disabled people and/or with neurodiverse conditions are given particular attention across the study of different accessibility issues. By addressing the needs of the more vulnerable or the underrepresented, highways and footways can overcome intersectional issues and become more safe, accessible and generous spaces for the fuller spectrum of society with different mobility abilities, creating more equitable landscapes for all.

Key Considerations

Every site is different.

Conditions of highways and footways change over the course of the day and year.

New road typologies and pilot schemes can be confusing and challenging for some.

Safety and accessibility issues are sometimes not obvious in desktop site analysis and design development.

Local knowledge of context is fundamental to the success and longevity of schemes.

Flexibility should be embedded in every scheme to cater for needs and demands over time of different users.

Physical infrastructure needs maintenance, management and monitoring.

Guidance is not readily available for emerging issues.

Key Recommendations

- ▶ Strategic and design approaches must be site specific.
- ▶ Site analysis needs to be more comprehensive to cover different conditions (e.g. 6pm-6am)
- ▶ Consultation and safety audits with accessibility groups, young people, women and other under-represented groups ensure inclusive design.
- ▶ Thorough EIAs or retrospective equalities analysis should be conducted for every scheme.
- ▶ Cross-departmental knowledge sharing and collaboration contributes to site-specific design solutions.
- ▶ Hybrid solutions, timed strategies and phased project delivery can respond to local needs and behavioural transitions.
- ▶ Management plans, monitoring and partnerships with stakeholders should be considered.
- ▶ Knowledge sharing across local authorities is vital.



Introduction

Why do we need to consider highways and footways accessibility?

The Equality Act 2010 does not set out any specific requirement for the built environment, and therefore has little enforceable relevance in respect of physical building standards. However, the Public Sector Equality Duty (PSED) - Section 149 of the Equality Act 2010 - has direct implications for local authorities and how they design and maintain their streetscapes.

The PSED requires public authorities to promote equality for people from protected groups by:

1. Removing or minimising disadvantages
2. Taking steps to meet their requirements where they are different from the needs of others
3. Encouraging participation in public life or in other activities where their participation is disproportionately low

As a result, any streetscape design must take into account the needs of a diverse range of users. This is affirmed by the Department of Transport's 2018, *Inclusive Transport Strategy*:

4.26: Local authorities are responsible for the design of their streets. It is for them to ensure any pedestrian environment scheme, including a shared space, is inclusive and that they meet the requirements of the Equality Act 2010.

What is the aim of the report?

This report sets out to establish Highways and Footways Accessibility Guidelines for the Central London Sub-Regional Transport Partnership (CLSRTP) — a key project delivered by the Cross River Partnership on behalf of Transport for London (TfL).

DSDHA and DBA have worked with representatives from the ten contributing local authorities and TfL to understand and identify key contemporary and emerging issues their local authority are facing in regards to highways and footways accessibility since the emergence of COVID-19.

For contextualisation and reference, DSDHA and DBA have compiled relevant and emerging guidance to best address and evaluate current and planned highways and footways schemes. Where there is a gap in guidance, case studies and references have been presented to illustrate a range of design approaches in different street typologies that not only adhere to minimum standards, but exceeds in both accessibility and aesthetic considerations.

This report will complement other previous studies commissioned by the CRP, such as 'Mobility Justice and Transport Inclusivity' (January 2021) and 'Meaningful Monitoring: Providing the Path to Positive Change' (March 2021).

How to use this report ?

The purpose of this report is to highlight contemporary issues affecting highways and footways and provide context, guidance and further references for CRP's audience of public, private and strategic partner organisations. Emerging guidance are referenced from regional sources such as Mayor of London (MoL) or Transport for London (TfL), or national and local community groups. Where guidance is incomprehensive, unavailable or is undergoing revisions, DSDHA and DBA include case studies to reference key lessons learnt.

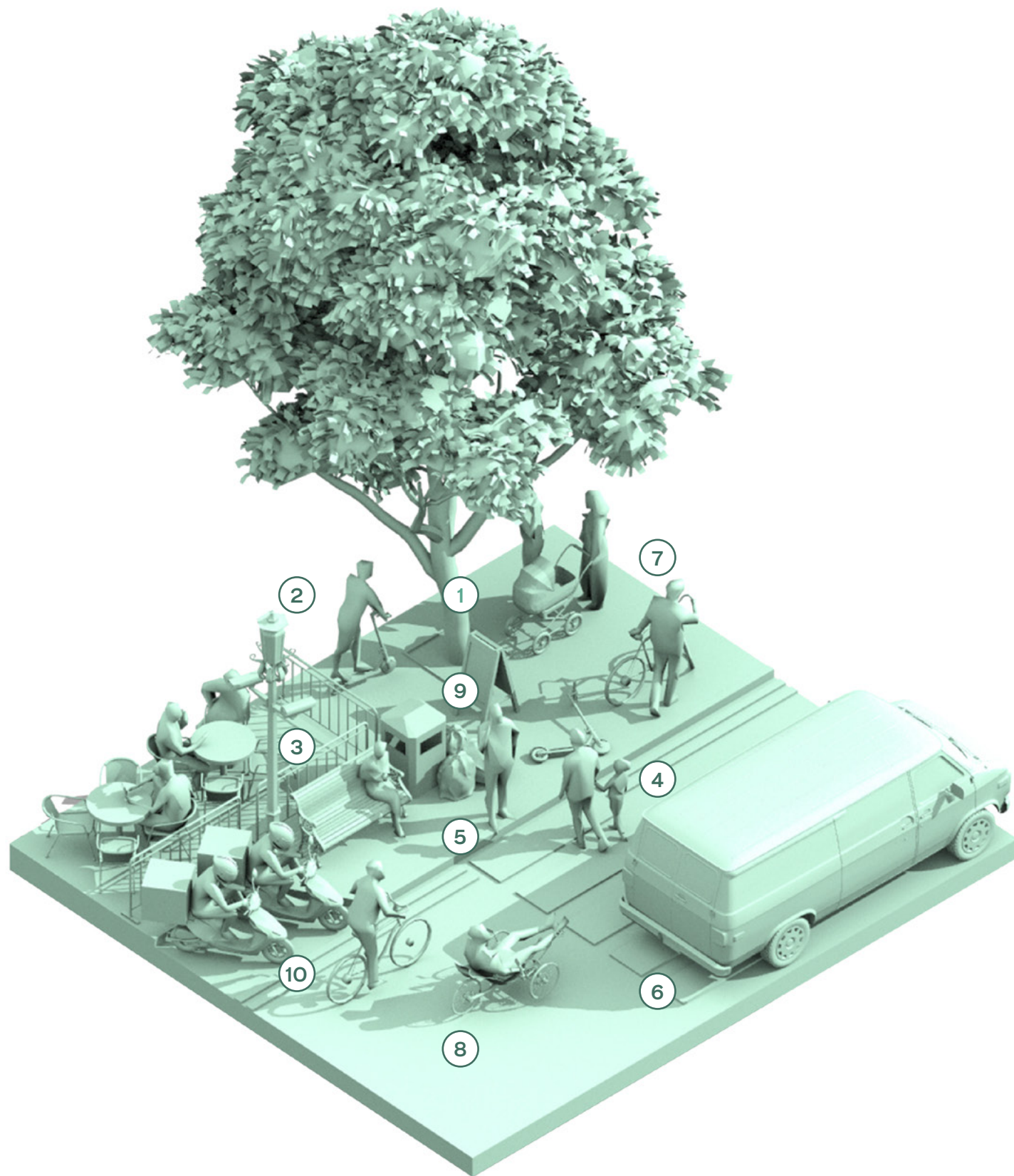


Fig 5. Illustration of emerging key issues affecting highways and footways today

Emerging Issues

The Covid-19 pandemic, climate emergency and evolving transport technologies and servicing trends are transforming the way we use and engage with the city. From residential neighbourhoods to high streets, there is an ever increasing demand for more outdoor space and amenities, greenery, and alfresco experiences. Active travel has become more popular than ever – walking, uptake of cycle and e-scooter use – which introduces markedly different volumes and modes of traffic on highways and footways. Many of these changes are experimental in nature and are enabled by temporary licenses or trials, and have yet to untangle the competing needs of different user groups.

As local authorities review short-term schemes and consider formalising some of those measures, they must balance the multiple functions and needs at local and strategic scales. This must revolve around the central idea that: if we design to the widest scope of society, it benefits everyone.

- 1 Modal Conflict**
Tensions between different modes of transport and use on highways and footways. These conflicts usually arise with new modal trends.
- 2 24-Hour Strategy**
'24-Hour strategy' focuses on readdressing the disparity between the day and night time experiences of public space.
- 3 Female Safety**
Risks and issues of safety and accessibility faced by female users of all ages in public spaces, intersectional to LGBTQ+ safety.
- 4 Child Friendly Spaces**
Spaces and routes that provide a safe setting for children to dwell, play and engage in independent active travel.
- 5 Designing for Neurodiversity**
Consideration of neurodiversity in highways and footways design, to include the neurotypical, neurodivergent & neurodegenerative.
- 6 Alternative Crossings**
Surface level crossings that are not explicitly described within the types outlined in Department of Transport's 'Manual for Streets'
- 7 Shared Use**
Shared use refers to spaces & routes with segregated or unsegregated zones for pedestrians and cyclists.
- 8 Inclusive Cycle Infrastructure**
The planning and designing of safe and inclusive cycle networks, provisions and facilities for all kinds of cycles and users.
- 9 Pavement Clutter**
Objects that obstruct pedestrian desire lines and negatively affect pedestrian comfort levels and safety.
- 10 Kerbside Activity**
Activities such as pick-up and drop-off, parking and loading and emerging conditions such as parklets, e-scooter parking and EV charging.

Existing Guidance

Overview of Guidance

As part of this study, a review of the availability of existing literature and guidance for the identified key issues was conducted. The sources are classified by their strategic level:

National guidance

- UK Parliamentary Committee reports
- Department of Transport (DoT)
- British Standards Institute (BSI)
- Highways England

Regional guidance

- Greater London Authority & Mayor of London
- Cross River Partnership (CRP)
- Centre for London (CfL)

Local guidance

- Strategic and technical guidance from the ten local authorities that form part of the CRP.

National, regional and local bodies lack guidance for some of the emerging issues, such as female safety, shared use and designing for neurodiversity. This study has gathered and reviewed relevant resources from specialist, expert and local groups that have produced analysis and recommendations to address these key issues.

Gap Analysis

A gap analysis has been produced to allow users of this document to cross reference existing guidance across different strategic levels and local authorities. Each number is referenced to a directory at the end of this document for further reading.

The literature highlighted under specialist, expert and local groups can be referred to for addressing and developing new guidance for emerging issues beyond minimum requirements. Many of these groups have collaborated with local authorities in the past and some have contributed to design and delivery of highways and footways schemes across London.

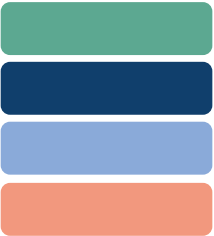
Key:

National

Regional

Local Authority

Other Relevant Groups



	Modal Conflict	24-Hour Strategy	Female Safety	Child Friendly Spaces	Neuro- diversity Design	Alternative Crossings	Shared Use	Inclusive Cycle Infra.	Pavement Clutter	Kerbside Activity
Gov			1.1.1				1.1.2			
DoT		1.2.1			1.2.2		1.2.3	1.2.4		
BSI		1.3.1			1.3.2					
Highways England								1.4.1		
GLA		2.1.1	2.1.2	2.1.3		2.1.4		2.1.5	2.1.6	2.1.7
CRP	2.2.1									
CfL		2.3.1								2.3.2
Camden		3.1.1							3.1.2	
City of London		3.2.1				3.2.2		3.2.3	3.2.4	3.2.5
Hackney				3.3.1				3.3.2		
Islington		3.4.1					3.4.2	3.4.3		3.4.4
Lambeth				3.5.1				3.5.2		3.5.3
Lewisham		3.6.1						3.6.2		3.6.3
RBKC				3.7.1			3.7.2			3.7.3
Southwark		3.8.1				3.8.2				3.8.3
Wandsworth										3.9.1
Westminster		3.10.1				3.10.2			3.10.3	3.10.4
Living Streets									4.1.1	4.1.2
Transport for All						4.2.1	4.2.2	4.2.3	4.2.4	
Wheels for Wellbeing							4.3.1	4.3.2		
RNIB						4.4.1	4.4.2		4.4.3	
GDBA				4.5.1			4.5.2		4.5.3	4.5.4
Secure by Design		4.6.1	4.6.2					4.6.3		
UCL			4.7.1							
BECG					4.8.1					
MSFG			4.9.1							
SusTrans	4.10.1									

Gap analysis survey of existing and emerging accessibility guidance, Conducted in December 2021.

Streetscape Typologies

The key and emerging issues identified in this study manifest in different kinds of streetscapes with different volumes and speeds of movement and traffic. TfL has defined a set of streetscape typologies relative to 'movement' and 'place', with 'movement' corresponding to flow and traffic across different users and modes, and 'place' corresponding to functions that are specific to and happen in particular places.

The specific relationships between highways and footways in each of these typologies give rise to recurring conflicts and issues highlighted in this study. Most of these issues are found in the low to medium 'movement' typologies, where pedestrian, cyclist and vehicular conflicts are most apparent. With the increasing uptake of active travel, some typologies with higher movement will also experience those previously identified for the slower pace and lower traffic typologies.



Fig 6. TfL's Streetscape Typologies.

Streetscape User Groups



It is essential to understand the full range of users of highways and footways, with consideration to their pace of movement, their mode of transport, where they travel, how they travel and their purpose of travel. Each existing condition and scheme has a set of behaviours and conflicts that is highly specific to an individual streetscape. Care and attention should be given to accessibility issues and concerns of people with disabilities and protected characteristics to address any physical, cultural and attitudinal barriers to equal access.

Building on DSDHA's research 'Sharing The Beautiful Everyday Journey' (commissioned by The Royal Commission for the Exhibition of 1851), and findings from the 'Spatial Intelligence Group' during COVID-19 pandemic, a wide range of users have been identified to encompass the variety of people using vehicles, cycles (including adapted cycles) and mobility aids, in different activities such as commuting, delivery and fitness. This study also builds on CRP's report on 'Mobility Justice & Transport Inclusivity' which captures important lived experiences and lessons for strategic planning and design.



Fig 7. 'Sharing the beautiful Everyday', 1851 Commission by DSDHA

Fig 8. CRP Mobility Justice & Transport Inclusivity Report.

Key Issues

1
Modal Conflict

2
24-Hour Strategy

3
Female Safety

4
Child Friendly Spaces

5
Designing for Neurodiversity

6
Alternative Crossings

7
Shared Use

8
Inclusive Cycle Infrastructure

9
Pavement Clutter

10
Kerbside Activity

Issue 1: Modal Conflict

What is Modal Conflict?

'Modal conflict' refers to the tensions between different modes of transport and use on highways and footways. These conflicts usually arise with new trends (e.g. e-scooter use, alfresco dining, delivery cycles, mobile phone use) or at the beginning of a scheme's implementation when new patterns of movement and dwell time emerge. The most prevalent of these modal conflicts are those between driving and active travel modes. They are in conflict as one is deterred by the other. Whilst each site generally prioritises a primary mode (e.g. busy tourist route), these should be carefully balanced with secondary modes (e.g. cycle route) without compromising safety and accessibility of all users.



Fig 9. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

Why is this issue of concern?

Local authorities across London have been proactive in trialling experimental schemes on highways and footways over the course of the COVID-19 pandemic to accommodate changes and demands, ranging from requirements for social distancing, increased uptake of active travel, to the introduction of alfresco dining. As these schemes are being reviewed and considered for formalisation, thorough consultation and safety audits are needed to address issues previously unaccounted for.

Transport for All's study on Low-Traffic Neighbourhoods and its impact on people with disabilities ('Pave the Way', 2020) uncover modal conflicts between pedestrian and vehicular use, specifically where vehicles are relied upon for mobility, be it private cars or taxis. The recommendations from this study can be applied to other modal conflicts (such as those present in floating bus stops) and has been referenced in the following sections.

Current and emerging guidance

'Meaningful Monitoring: Providing the path to positive change', Cross River Partnership, 2021.

How to make positive change?

1. Monitor trials and experimental schemes, and conduct retrospective equalities analysis in consultation with local access and disability groups.
2. Involve specific local, regional or national groups in the consultation process to identify the needs and concerns of people with disabilities.
3. Conduct independent road safety audits and thorough equality impact assessments during the design process to ensure safety and accessibility for all user groups.
4. Consider timed strategies to accommodate different user needs.
5. Consider phased project delivery, gradual implementation, and travel training with RNIB/GDBA to ease behavioural transitions.
6. Where traffic restrictions are introduced, consider dispensation strategies for Blue badge holders, people with disabilities and carers where appropriate.



Streateries Consultation, Camden

Experimental trials of al-fresco dining over the course of the COVID-19 pandemic have been met with public and governmental support but monitoring and consultation is needed to address issues of nuisance, pavement clutter and under-managed kerbside activity. Retrospective equalities analysis can also be conducted to identify any neglected issue or need of people with disabilities.



Low Traffic Neighbourhoods Dispensations, Hackney

Low Traffic Neighbourhoods promote both sustainability and active travel but traffic re-routing can disadvantage those who rely on vehicles for mobility. Hackney and several other local authorities have created dispensation strategies for Blue Badge holders to address their access needs. Such strategies can be considered with specificity to different schemes, on a case-by-case basis.

Issue 2: 24-Hour Strategy

What is a 24-Hour Strategy?

A '24-Hour strategy' focuses on readdressing the disparity between the day and night time experiences of public space. It endeavours to enhance safety and accessibility to all who may socialise, work and travel at night, but especially vulnerable and precarious groups such as women, LGBTQ+ people and night time workers through policy, management and public realm design. Examples include extension of opening hours for designated zones and promotion of 24-hour uses of public realm spaces and amenities to support businesses and livelihoods that continue late at night.

Why is this important?

1.6 million Londoners work after 6pm², the precarious conditions of which have been laid bare by the COVID-19 pandemic as the city's reliance on the NHS, home and food delivery services reached unprecedented levels. Against this backdrop, the Mayor of London has published a comprehensive guidance in December 2020 – 'Developing a Night Time Strategy' – to address multifaceted aspects of developing a night time strategy, from governance, economy to public realm. This study focuses on the latter and consolidates recommendations for highways and footways from other sources for consideration. Lighting strategies are key to addressing safety and accessibility on highways and footways and must balance the considerations of visibility, energy consumption, light pollution and biodiversity.

Current and emerging guidance

'Developing a Night Time Strategy: Part 1 & 2', Mayor of London, 2020.

'Lighting against crime', Secure by Design, 2018.

'Toolkit for lighting design', Centre for London, 2021.

'City of London's Lighting Strategy', City of London, 2018.

'Lighting Masterplan 2020-2040', Westminster City Council, 2020.

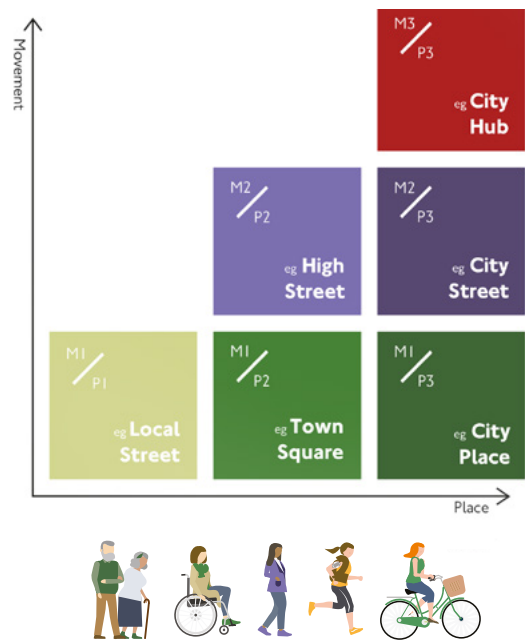


Fig 12. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Where absent, support local authority in creating a lighting strategy.
2. Utilise the Night Time Data Observatory to inform site analysis, planning and design.
3. Conduct site surveys at different times of the day to understand safety issues.
4. Conduct safety audits, e.g. using Safetipin.
5. Consider power infrastructure provisions for events lighting and operations.
6. Engage with lighting designers early in the design process and develop site-specific lighting strategies to balance considerations of: accessibility, legibility, visibility, atmosphere, energy consumption, light pollution and biodiversity.
7. Consider implementing pilot schemes such as Night Time Enterprise Zones.
8. Coordinate lighting strategies with major developments at planning so that public and private lighting complement each other.

Case Study: City of London Lighting Strategy



Location	City of London
Typology	High Street
User Group	Pedestrian/ Cycle/ Vehicle
Status	Permanent

- Safety:** Lighting levels increase safety of all users by enhancing visibility and passive surveillance.
- Inclusivity:** Consistent lighting levels reduce stark contrasts between light and darkness, making spaces more navigable for all.
- Comfort:** Illumination during darkness is essential for ease of navigation.
- Legibility:** Smart control systems allow each light to adapt brightness in relation to its surroundings, such as; shopfront light spill.
- Attractiveness:** Landmarks, heritage and natural features are aesthetically enhanced by lighting. This encourages night time use.
- Directness:** Enables users to take direct routes without taking detours to avoid unsafe places.

Case Study: Orford Road, Walthamstow

- Safety:** Active frontages, lighting and night time activities strengthens passive surveillance and enhances safety.
- Inclusivity:** Night Time Enterprise Zone diversifies uses of the high street and encourages footfall.
- Comfort:** Vehicular ban and adequate lighting levels make the area walkable and active.
- Legibility:** Clear lighting and visual delineation for shared use.
- Attractiveness:** Planters and street lighting contribute to a sense of welcoming and encourages longer dwell times.
- Directness:** Street is integrated within a well-connected local cycle and pedestrian network.



Location	Waltham Forest
Typology	High Street
User Group	Pedestrian / Cycle
Status	Permanent

Issue 3: Female Safety

What is Female Safety?

The recent tragic cases of Sarah Everard and Sabina Nessa have spotlighted the fact that women and girls still experience different forms of harassment, abuse and violence in public space, an endemic issue which restricts their freedom in their use and experience of the built environment. 'Female safety' in this study refers to the risks and issues of safety and accessibility faced by female users of all ages in public spaces, which has largely been shaped by historically male-dominated urban and transport planning. This study promotes equity for all, which aims for all people to have a similar quality of experience in the public realm and considers the issue of 'female safety' intersectional with LGBTQ+ safety. It brings together the recent guidance, initiatives and recommendations in the wake of the renewed attention to female safety which can benefit all vulnerable or disempowered groups.

Why is this issue of concern?

According to the 2021 UN Women UK YouGov survey, 71% of women in the UK have experienced some form of sexual harassment in a public space. Female safety is often compromised on the street or in public and semi-public transportation; in London, over 40% of sexual assaults take place in public spaces including the transport network³. Although gender inequality cannot be addressed by design and planning alone, the design and management of highways and footways can be improved to improve safety and inclusivity. Women's Night Safety Charter and High Streets for All (MoL) have set out important principles that can be applied to highways and footways design, yet more needs to be done to ensure that designs achieve the regional goals at a local level and address site-specific needs and issues.

Current and emerging guidance

'Developing a Night Time Strategy: Part 1 & 2', Mayor of London, 2020.

'Women's Night Safety Toolkit', Greater London Authority, 2019.

'London's participation in UN Women's Safer Cities and Safe Public Spaces Programme' UCL Urban Laboratory, 2020.

'Make Space for Girls', Make Space for Girls, 2020.

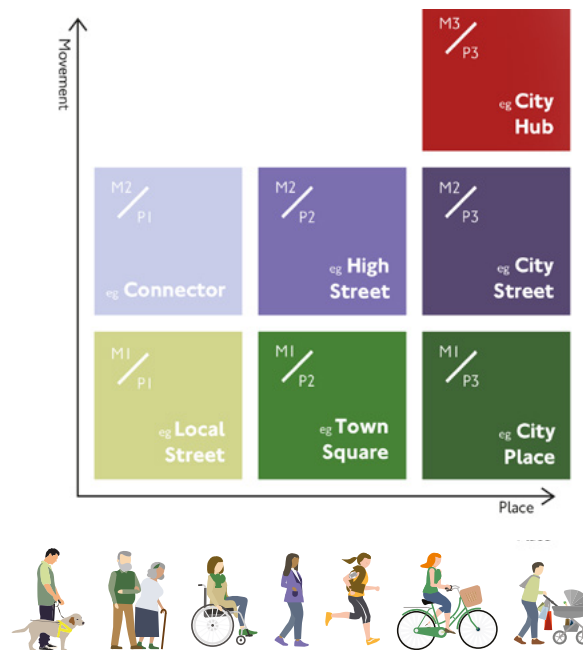


Fig 15. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

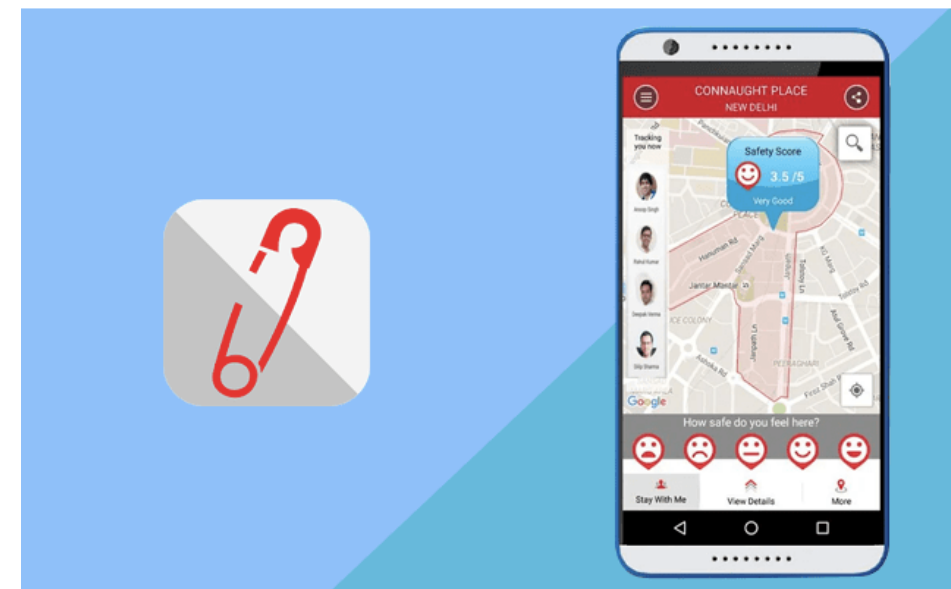
Implement gender mainstreaming methodologies (i.e. integration of a gender perspective) in consultation, design development and monitoring:

1. Sign up to the Women's Night Safety Charter.
2. Involve specific local, regional or national groups (e.g. women's organisations) in the consultation process to identify the needs of women and other vulnerable groups.
3. Consult and consider partnerships or advisory forums with local groups to promote safe active travel (e.g. Cycle Sisters) and night time safety (e.g. Soho Angels).
4. Conduct site surveys at different times of the day to understand safety issues.
5. Conduct safety audits, e.g. using Safetipin.
6. Consult crime data from Met Police Safer Neighbourhood Teams and crowd-sourced data (e.g. Safeandthecity) to identify areas of concern in strategic planning and streetscape design.
7. Improve lighting strategies and improve sightlines by decluttering streetscape design.



Soho Angels, Westminster

Soho Angels are a volunteer group run by City of Westminster and the LGBT Foundation to provide help to people who become vulnerable after a night out. Volunteers are trained by St John Ambulance, Metropolitan Police and Drinkaware to deal with a spectrum of issues to help keep people safe, prevent trips to A&E and reduce crime.



My Safetipin, App

My Safetipin is a free app that allows users to conduct safety audits of routes and locations based on nine parameters: lighting, openness, visibility, people, security, walk path, public transport, gender usage and feeling. This can be used for site surveys and analysis, but also as consultation tool to identify and mitigate local safety and accessibility issues.

Issue 4: Child Friendly Spaces

What are Child Friendly Spaces?

'Child Friendly Spaces' are spaces and routes in highways and footways schemes that provide a safe setting for children to dwell, play and engage in independent, active travel. It is important to design child friendly spaces in order to design spaces for all.

Whilst young people deserve the right to be able to travel on and use highways and footways independently anywhere in their neighbourhood and city, there are opportunities in certain street typologies where provisions and infrastructure for play and dwelling can be introduced or enhanced.

Why is this important?

Whilst many of our fondest memories are made in the extracurricular hours, be it over a commute between school and home with friends, or spending time in the park, these journeys and spaces are not always safe, or designed with desires and requirements of children in mind. With the rising popularity and success of timed strategies across London such as Play Streets and School Streets, there is a need to review and monitor such strategies with consideration to modal interfaces, enforcement and management to inform the planning and delivery of future initiatives. Both temporary and permanent schemes need hybrid approaches – design and management – to address emerging issues. For example, (1) issues of planting being appropriated for stashing can be designed-out by appropriate planting specification, and (2) the sporadic maintenance of community-led greening can be redressed by devising a community management plan at the outset of planning.

Current and emerging guidance

Policy S4 of 'Play and Informal Recreation', London Plan, 2021.
'Making London Child-Friendly', MoL, 2020.
'Making London Child Friendly - Finding places and streets for children and young people', GLA, 2019
'Sustainable Maintenance Funding', CLSRTP, 2022.
'Inclusive Design Standards', LDDC, 2019.
'School Streets: Timed Traffic Restrictions', Hackney Council, 2021.
'Playing Out Manual' Playing Out, 2018.
'Guide to Designing Inclusive Playgrounds', HAGS, 2019.



Fig 18. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Involve young people in the development of a project and consider the use of engagement methodologies, e.g. 'Voice Opportunity Power' toolkit and independent mobility assessments with young people (ZCD Architects for De Beauvoir Estate, Hackney).
2. Monitor existing uses and consult with police community support officers (PCSOs) and park officers if adjacent to parks to understand local issues and sensitivities.
3. Devise a balanced approach for safety, with consideration to passive surveillance, risk and exploration via 'risk/benefit' assessments.
4. Maintain clear distinction between highways, footways and play space areas for children and all other users.
5. Where greening is used, consider the level of permeability of planting with consideration to desire lines and unintended uses.

Case Study: School Street for Gayhurst Community School, Hackney



Location	Hackney
Typology	Local Street
User Group	Pedestrian/Cycle
Status	Temporary

- Safety:** Timed road closures enforced by camera with traffic cones and signage erected during play sessions for safety. Infrastructure provided by council, and management provided by school.
- Inclusivity:** Exemptions to road access are given to certain users such as blue badge holders. The physical environment is only as inclusive as the pre-existing streetscape itself.
- Comfort:** Active supervision and physical segregation (i.e. traffic cones) increases comfort and trust for children, teachers and parents.
- Legibility:** Signage communicates restrictions to motorists ahead of closed street sections.
- Attractiveness:** Temporary measures have ad-hoc aesthetic. Greening methods can be considered in the next phase of School Streets.
- Directness:** The schools street is immediately adjacent to the school. Access for pedestrians and cyclists are maintained.

Case Study: Murrain Road*, King's Crescent, Hackney



- Safety:** The restriction to vehicular traffic reduces safety hazards. Passive surveillance from homes increase safety.
- Inclusivity:** Play spaces designed for open interpretation encourage other forms of use, such as socialising and resting.
- Comfort:** A variety of furniture types caters for the comfort of different users.
- Legibility:** The material and level changes between highways and footways provide clear delineation.
- Attractiveness:** Use of traditional play equipment and natural elements like rocks, logs and water create an inviting setting.
- Directness:** An attractive and direct route for pedestrians and cyclists to Clissold Park. Children can access the play street directly from their homes.

Location	Hackney
Typology	Local Street
User Group	Pedestrian / Cycle
Status	Permanent

*Murrain Road is not adopted highway, but lessons can be drawn from its design approach to balancing play and footway activity.

Issue 5: Designing for Neurodiversity

What is Designing for Neurodiversity?

'Designing for neurodiversity' refers to the consideration of all aspects of neurodiversity in highways and footways design, inclusive of the neurotypical (the majority, estimated to be up to 80%) and the neurodivergent (e.g. autism, ADHD, dyslexia), and the neurodegenerative, whereby sensory processing differences develop over time, typically through age-related conditions such as dementia or Parkinson's.

Why is this important?

There is a general societal illiteracy in neurodiversity and a systemic lack of understanding and consideration for disabilities that are less visually detectable in planning and design. For highways and footways to be truly accessible, the sensitivities and needs of the neurodiverse and the ageing population must be considered and addressed. New guidance is emerging and under consultation, such as 'Design for the mind: Neurodiversity and the built environment' (BSI)', which this study draws from for recommendations.

The wide spectrum of neurodiversity calls for a nuanced understanding of each site with respect to size, activity, volume of traffic and other triggers. However, as a general guide, sensory overload is a common issue shared across the spectrum, which can be triggered by 'visual noise' such as bright colors, patterns and stripes, especially when these are unexpected, but also shadows and dappled shade in some cases. Considerations should be made in design development to these sensitivities. Flexibility should be incorporated into any new scheme to allow people to take different routes depending on their preference for certain environments. In larger public spaces, care should be taken to create areas of respite and intimacy to cater for those who struggle with open areas.

Current and emerging guidance

'PAS 6463:2021. Design for the mind: Neurodiversity and the built environment', British Standards Institute, 2021.

'Pave the Way', Transport for All, 2020.



Fig 21. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

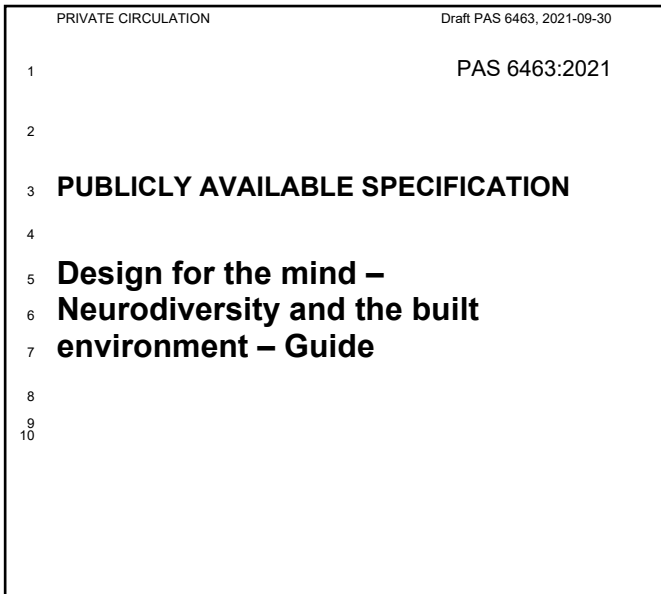
How to make positive change?

1. Consult with national, regional or local user groups.
2. Ensure that footway widths are sufficiently wide to reduce pedestrian congestion and visual noise, allowing users to take the desired journey associated with their needs.
3. Reduce pavement clutter where possible, and address emerging issues such as discarded e-scooters on footways.
4. Where appropriate, create zones for buffer and respite along busy streets, e.g. green buffer against traffic and cyclists.
5. In larger spaces, provide further guidance across, around and routes through, as well as introducing seating and rest areas.
6. Share consultation findings and lessons learnt with other local authorities to improve understanding of neurodiversity and relevant considerations for planning and design.



Autism Hour, National Autistic Society

Over the past four years, the National Autistic Society's 'Autism Hour' Campaign has promoted autism friendly shopping experiences. Participating shops have quieter hours with no music or works being carried out to make the shopping environment more accessible. Staff are also trained about autism as part of the scheme. Traffic-calming and timed closures similarly can benefit different people across the neurodiversity spectrum.



PAS 6463:2021, British Standard Institute

PAS 6463 is an emerging technical guidance (under consultation) on how to consider neurodiversity when in designing buildings and external spaces. The guidance focuses on recommendations for reducing the potential for sensory overload, anxiety or distress.

Issue 6: Alternative Crossings

What are Alternative Crossings?

'Alternative crossings' refer to surface level crossings that are not explicitly described within the types outlined in Department of Transport's 'Manual for Streets' and 'Guidance on the use of tactile paving surfaces'. The three types referred to in the study – colourful crossings, Copenhagen crossings and buff-top synchronised crossings – fall under the categories of 'uncontrolled crossings', 'informal crossings' and 'signalised crossings' within the manual. Our recommendations should be used to develop alternative crossing types, and not exclusively for those mentioned in this study.

Why is this important?

This study specifically looks at three types of alternative crossings:
Colourful crossings: In recent years crossings featuring colour and patterns have become popular in central London. These crossings have caused confusion and safety risks to users with sight loss, dementia, learning disabilities, neurological conditions and horses. It is now ill-advised to implement such crossings.

Buff-top synchronised crossings: Buff coloured surfacing are used increasingly in major locations with high footfall (e.g. St Paul's Cathedral, Oxford Circus, Portman Square) to visually reinforce synchronised crossings and for aesthetic reasons. Attention should be given to maintenance regimes as they are more vulnerable to staining.

Copenhagen crossings: Copenhagen crossings have been introduced in some boroughs at side road junctions to reinforce pedestrian priority as set out by the Highway Code. They normally consist of a raised table in same or similar surfacing as the footway. Consultation, safety audits and evaluations should be conducted when implementing this relatively new typology.

Current and emerging guidance

'Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure', Department for Transport, 2021.
'Creating better streets: inclusive and accessible' places. CIHT 2018.



Fig 24. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Consult with national, regional or local user groups when developing alternative crossings.
2. Conduct independent road safety audits and thorough equality impact assessments in the design process to ensure that alternative crossings are safe and accessible to all user groups.
3. Introduce signage to make road users aware of road changes ahead in new pilot schemes.
4. Ensure travel training is built into the programme for local blind and partially sighted people where possible.
5. Monitor user behaviour after implementation and make adjustments where necessary.
6. Share technical and design details, empirical findings and lessons learnt for alternative crossings with other local authorities to improve consistency across London to reduce confusion for users especially people with disabilities.

Case Study: Portman Square, Westminster



Location	Westminster
Typology	Crossing
User Group	Pedestrian/ Cyclist/ Vehicle
Status	Permanent

- Safety:** Visually enhanced crossing and dropped kerbs enhance safety and accessibility of crossings.
- Inclusivity:** Step-free access at crossing points. Synchronised crossings enhance clarity of when to cross.
- Comfort:** Buff-top crossing is tonally consistent with streetscape and does not add to visual confusion.
- Legibility:** Legible crossings with traffic signalling and road markings on buff-top surface.
- Attractiveness:** Buff-top enhances perception of crossing and encourages more cautious behaviour from drivers.
- Directness:** Synchronised crossing promotes movement along major desire lines.

Case Study: Clapham Old Town, Lambeth



- Safety:** Material treatment of crossover and raised table encourages vehicles and cyclists to respect pedestrian movement.
- Inclusivity:** The crossing prioritises movement of all footway users, especially those who move at a slower pace.
- Comfort:** High quality surface materials and level crossing enhances accessibility and quality of pedestrian journeys.
- Legibility:** Clearly defined route for pedestrians. Vehicles and cyclists are clearly signaled to give way to pedestrians.
- Attractiveness:** Street promotes pedestrian-priority journeys, slower traffic movements and longer dwell times.
- Directness:** Pedestrian movement prioritised along main desire line.

Location	Lambeth
Typology	Crossing
User Group	Pedestrian/ Cyclist/ Pedestrian
Status	Permanent

Issue 7: Shared Use

What is Shared Use?

'Shared Use' is defined as spaces and routes with segregated or unsegregated zones for pedestrians and cyclists³. Segregation can be achieved with features such as a white line, a kerb, tactile paving, planting, signage and bollards. This is not to be confused with 'Shared Surfaces' which involves the removal of the traditional physical separations between all road users, including motor vehicles.

Why is this issue of concern?

Shared use spaces and routes usually create a more even surface with subtle level changes for pedestrians and cyclists. This increases accessibility for those with restricted mobility issues whom are restricted by regular kerbs, such as wheelchairs, prams, luggage and rollators. These spaces usually encourage slower paces and speeds for different user groups and promote longer dwell times.

However, such spaces and routes need to be carefully designed as the removal of segregation can cause issues for certain users, specifically those who are blind or partially sighted. The RNIB and GDBA have called for a nationwide ban for 'Shared Surfaces' as kerbs and level changes are essential for navigating highways and footways, whilst the Department for Transport has withdrawn Transport Note 1/11 and imposed a ban on 'Shared Surfaces' for areas with high-levels of traffic⁴. Whilst these pertain to areas where motor vehicles are involved, lessons should be applied to 'Shared Use' schemes, and some form of segregation should always be maintained with cyclists. Furthermore, the high cost of shared use schemes due to associated costs of drainage works and substantial build-ups should be considered.

Current and emerging guidance

- 'Seeing Streets Differently', Royal Institute of Blind People, 2021.
- 'A Gear Change, A Bold Vision for Walking and Cycling', Department of Transport, 2020.
- 'PAS 6463:2021. Design for the mind: Neurodiversity and the built environment', British Standards Institute, 2021.



Fig 25. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Analyse and address site-specific uses and movement, with attention to areas of conflict and different behaviours across the day and year, especially where events and seasonality have significant impact on the use of space.
2. Identify areas with narrower pavements where pedestrianisation may be beneficial.
3. Consult with national, regional or local disability and cyclist groups on proposed designs, and throughout workstages.
4. Design with visual and/or tactile separation to ensure safety and increase accessibility. Shallow and chamfered kerbs, tonal contrast and material change are examples of how to maintain definition without reducing accessibility.
5. Define maximum traffic speeds and provide traffic calming devices.
6. Continue to monitor the finished scheme, consulting with relevant groups associated with the scheme to make any necessary adjustments, should there be unexpected safety or accessibility issues.

Case Study: Whitecross Street, Islington



Location	Islington
Street Typology	High Street
User Group	Pedestrian/ Cycle/ Vehicle
Status	Permanent

- Safety:** Clear distinction between highway and footways whilst maintaining flexibility for market activation. Uses both visible and tactile distinction.
- Inclusivity:** Shallow & flush kerbing and tactile edges define uses and balance the different needs of people with disabilities. Thresholds between footway and buildings also improved.
- Comfort:** Reduced traffic with the prioritisation of pedestrians and cyclists.
- Legibility:** Consistent levels with visual distinction. Delineation provided for market stalls.
- Attractiveness:** Trees line the street, historic streetscape with heritage features, such as pub sign.
- Directness:** Direct north-south route for all users.



Stockwell Memorial Gardens, Lambeth

High quality paving materials used across shared use space, with visual and tactile delineation between pedestrian and cycle zones. Raised kerb at beginning and end of cycle route enhances further delineation.



Archway Gyratory, Islington

Shared use space for pedestrians and cyclists, with clear visual cues (i.e. material change, bollard signage) and delineation with shallow kerbs. Zebra crossing in place to emphasis pedestrian priority.

Issue 8: Inclusive Cycle Infrastructure

What is Inclusive Cycle Infrastructure?

'Inclusive cycle infrastructure' refers to the planning and designing of safe cycle networks, provisions and facilities for all kinds of cycles used by a diverse range of people as forms of mobility aid and transport. These may include but are not limited to: Tricycle, Tandem, Handcycle, Recumbent, Wheelchair Tandem, E-cycle, Cargo Bike, Trailer bike, and Tag-a-long. Inclusive cycle infrastructure can also address cultural and attitudinal issues that prevent people with disabilities and protected characteristics from cycling.

Why is this important?

Across London, existing cycle networks, lanes and parking facilities are predominantly designed for the standard bicycle and cyclists travelling at high speeds. Often such cycle infrastructure, such as chicane barriers, exclude other cycle types, which may serve as the chosen form of mobility for people with disabilities. Three-quarters of disabled cyclists use their cycle as a mobility aid, yet 45% of such cyclists have been asked to dismount and walk or wheel their cycle⁵. One third of disabled cyclists have also been unable to park or store a non-standard cycle because facilities were inadequate⁶. Whilst the gender gap in cycling has narrowed over the course of COVID-19, there are still significant obstacles in accessibility and safety, and underlying systemic issues (e.g. under-representation and racial profiling) that prevent women and people from BAME backgrounds from cycling. Inclusive cycle infrastructure is key to addressing intersectional issues in urban mobility.

Current and emerging guidance

'A Guide to Inclusive Cycling', Wheels for Wellbeing, 2019.

'London Cycling Design Standards', Transport for London, 2014.

'Cycle Traffic and the Strategic Road Network', Highways England, 2016.

'Cycle Accessibility Tool', Southwark Council, tbc.



Fig 31. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Increase awareness on different cycle types and increase their representation in strategies and documents.
2. Reference the dimensions of 'Cycle Design Vehicle' (2.8m long and 1.2m wide) as outlined by Highways England for cycle infrastructure.
3. Review positions and appropriateness of chicanes, bollards and barriers and address any accessibility issues they may cause to non-standard cycles.
4. Provide non-standard cycle parking bays where cycle parking provision is enhanced or introduced.
5. Consider the use of a 'Blue Badge' scheme for disabled cyclists, which may allow them to cycle in non-cycling areas, and specially allocated cycling parking facilities near entrances. This could be an alternative offer to a disabled car parking space. For more please refer to 'A Guide to Inclusive Cycling'.



Adaptive Cycle Store, Cycle Hoop

Cycle hangers are being introduced across London, providing secure parking on highways, usually in place of existing parking bays. Cycle Hoop has developed an adaptive cycle store which caters for non-standard cycles which may be particularly beneficial for people with disabilities who lack parking facilities.



Finsbury Park Station, TfL

The use of inclusive sheffield stands, anchors and signposted larger parking bays allow a wider range of users to park their cycles. Parking provisions such as these, gives greater confidence and provides accessibility to those who use non-standard cycles for mobility.

Issue 9: Pavement Clutter

What is Pavement Clutter?

Our footways are canvases to all sorts of kinetic and static activities that take place at various speeds with different spatial requirements, from brisk journeys by foot, to a neighbourly chat under the canopy of a street tree. As such, each site will have different tensions between movement, furniture, and other elements of street infrastructure (e.g. planting). This study frames 'pavement clutter' as objects that obstruct pedestrian desire lines and negatively affect pedestrian comfort levels. This may include, but not limited to: A-boards, street refuse, bollards, AI-Fresco dining furniture, advertising, light columns, vehicle charging cables, bins, telephone cabinets, trees, traffic light control boxes, new types of connected bins and benches, cycle hire stands, dumped e-scooters and e-bikes. Often, many of these new elements are those of private companies.

Why is this issue of concern?

Over the course of the Covid-19 pandemic, footways across London have become busier than ever. With more people walking and cycling, the rise of instant or same-day delivery, and the uptake of e-bikes and e-scooters spearheaded by private companies, against the backdrop of ULEZ expansion and the increase of EV charging points. Many local authorities have also introduced pavement extensions to ease pressure and provide more space for social distancing. Although these emerging trends and changes achieve certain principles of Healthy Streets (TfL), they have implications for the use and navigation of footways, especially for people with disabilities and mobility issues. Equal accessibility must be a priority in the formalisation of any temporary scheme.

Current and emerging guidance

'BS8300-1:2018 Design of an accessible and inclusive built environment - External environment', British Standards Institute, 2018.

'Pedestrian Comfort Guidance for London', TfL, 2019.

'Equal Pavements Pledge', Transport for All, 2020.

'Cut the Clutter', Living Streets, 2020.



Fig 34. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Consult with national, regional or local accessibility groups.
2. Establish minimum pavement widths no lower than 1.5m where possible as per Transport for All's 'Equal Pavements Pledge'.
3. Creation of Street Furniture Zones, away from straight desire lines of pedestrians.
4. Develop a design code for narrower pavements where accessibility is compromised.
5. Coordinate with licensing teams to monitor footway activity and enforce conditions.
6. Provide adequate cycle parking and consider retrofitting cycle hoops to light columns and bollards where space is at a premium.
7. Designate e-scooter and e-bike parking zones and docks, where possible on highways to reduce pavement clutter.
8. Ensure that new EV charging points are installed at appropriate locations not compromising footway movement.

Case Study: Noble Street, City of London



Location City of London
Typology EV charging
User Group Pedestrian / Cycle
Status Permanent

Safety: Rapid charging EV point for taxis placed on footway build-out. Footway width is not compromised.

Inclusivity: Pavement widths are maintained by appropriately-placed EV charging point, not compromising pedestrians especially those with pushchairs and mobility aids.

Comfort: User experience considered for both pedestrians and charging bay users.

Legibility: Pedestrian desire line kept clear. Road marking and signage delineate charging area clearly.

Attractiveness: Footway build out is in keeping with existing footway paving material.

Directness: Pedestrian zone kept clear and charging point convenient for users.

Case Study: E-scooter Parking, Camden

Safety: Pavement clutter reduced by designating parking space for e-scooters.

Inclusivity: Reduction of clutter ensures minimum pavement widths are maintained for pedestrians, especially those who have mobility issues.

Comfort: Designated parking bays encourage neater parking. Less clutter on footways.

Legibility: Parking bay is clearly defined by road markings.

Attractiveness: Parking bay is neatly maintained by service providers.

Directness: Parking bay placed next to footway and on the highway for ease of access.



Location Camden
Typology E-scooter parking
User Group Pedestrian / Cycle
Status Permanent

Issue 10: Kerbside Activity

What is Kerbside Activity?

'Kerbside activity' refers to activities such as pick-up and drop-off, parking and loading at the edge of the highways, adjacent to the footways. This encompasses various conditions such as legal and illegal servicing and parking, pavement parking, bus, coach and taxi activity. Emerging conditions include parklets, EV charging, and food delivery pick-up and breaks for gig workers. As people, vehicles and activities change on footways and highways, the kerbside needs to adapt to changing demands.

Why is this issue of concern?

The kerbside is the interface between all users of highways and footways – from residents and businesses to delivery workers and cyclists – which often presents critical issues of accessibility and safety. Often, instances of kerbside activity, both legal and illegal, pose safety issues when vehicles cause interruption to the journeys of pedestrians and cyclists, which are especially hazardous for wheelchair and pushchair users who may be forced to navigate instead on the highway. Pavement parking and loading also causes damage to footway surfaces (e.g. oil spills, car dust and pavement cracks), which has implications for accessibility especially for people with mobility aids, as well as, blind and partially sighted pedestrians. With the emerging trends of electric vehicle, e-bike and e-scooter use, and the increasing reliance on home and food deliveries, kerbside designations and regulations need to be reviewed. Parking bays with pavement buildouts and hybrid solutions like loading pads should be considered in future schemes to rebalance the spatial requirements of users and furniture (e.g. EV charging points) against behavioural patterns and hours of operation.

Current and emerging guidance

'BS8300-1:2018 Design of an accessible and inclusive built environment - External environment', British Standards Institute, 2018.

'Kerbside Loading Guidance', TfL, 2017.

'Reclaim the Kerb: The Future of Parking and Kerbside Management', Centre for London, 2020.

'Take Action Against Pavement Parking', Living Streets, 2020.



Fig 37. Street typologies where the issue is of concern and user groups that are particularly affected by the issue.

How to make positive change?

1. Conduct site surveys at different times of the day to understand formal and informal kerbside activity, especially emerging issues such as food delivery pick-up zones.
2. Conduct road safety audits in all new schemes and retrospectively, for temporary trials that may not have undergone an auditing process to account for new kerbside behaviours and issues.
3. Consider delivery & servicing reduction and/or consolidation schemes that work with timed strategies in partnership with stakeholders.
4. Consider hybrid solutions such as loading and parking pads to accommodate different modal demands throughout the day.
5. Where possible, phase out half-on half-off parking (i.e. designated car parking bays painted partly on the footway and partly on the highway) to improve accessibility for pedestrians, and users of wheelchairs and pushchairs. Pavement build outs should be prioritised over pavement parking.

Case Study: Tottenham Court Road, Camden



Location	Camden
Typology	Flexible loading bay
User Group	Pedestrian / Vehicle
Status	Permanent

Safety: Flexible loading bay utilises a timed strategy to reduce activity during busy hours. When bay is not in use, pavement widths are maximised for higher pedestrian flow capacity.

Inclusivity: Flush kerb and high quality materials makes flexible bay accessible for all pedestrians, provided such bays have good tonal and tactile contrast.

Comfort: Materiality is consistent with the footway, encouraging pedestrians to utilise the space when bay is not in use.

Legibility: The flush kerb and road marking offers visual separation between footway, highway and loading bay.

Attractiveness: Flexible loading bay enhances the generosity of the footway by doubling its width.

Directness: Timed strategy allows vehicles to be use the space efficiently. Generous footway widths for pedestrians to manoeuvre.



Regent Street Delivery Consolidation Scheme, Westminster

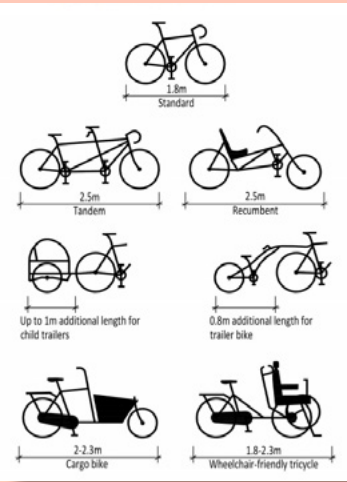
The Crown Estate has introduced a delivery consolidation scheme whereby multiple deliveries to different retailers are combined and distributed via one consolidation centre to reduce vehicle movement by up to 85%, and in turn reducing congestion and loading at kerbside.



Hither Green Parklet, Lewisham

Built across nine car parking spaces, this community-designed parklet introduces public uses such as seating and al-fresco dining into a safe space within the highway. The parklet is constructed mainly of reused materials and offers cycle parking also.

Intersectional Issues & Shared Takeaways



Data Harnessing and Analysis

Building upon traditional site analysis, additional data sources should be used to inform a more comprehensive and nuanced understanding of user behaviour, safety and accessibility issues, perceived risk, and cultural or attitudinal barriers in highways and footways design. Some of these data sources are new (e.g. Night Time Data Observatory) and emerging (e.g. accessibility tools designed by local authorities) and will become more familiar to planners and designers in due course. Crowd-sourced data, such as Safe and the City can capture information from more transient users that may evade consultation processes. Datasets, tools and methodologies that have been raised during this report are below:

- Night Time Data Observatory
- Safe and the City
- Emerging accessibility tools, e.g. City of London's Street Accessibility Tool (COLSAT), and Southwark's Accessibility Tool for cycle lanes.
- Comprehensive site surveys
- Met Police Safer Neighbourhood Teams and Police Community Support officers
- Parks Officers

Consultation Tools

In the surveying of emerging issues, especially those that involve situation and typologies that are less familiar for users, consultation is key to identifying any potential or undetected safety and accessibility issues, and conducive to finding site-specific design solutions that can benefit all street users.

Besides consultation with accessibility group and other relevant national, regional or local user groups, the following tools can be utilised to specifically engage with women and young people to draw out specific concerns, risk attitudes and needs:

- Safetipin
- Voice Opportunity Power
- Risk/benefit assessments
- Commonplace

Rule of thumb

Although technical guidance is often unavailable for the emerging issues identified in this study, there are simple principles that can be followed at planning and design stages to address immediate accessibility issues regarding delineation and clearances. These include:

- Use of 'cycle design vehicle' (Highways England) for typical cycle dimensions
- Maintain tactile and/or visual delineation at highways and footways interfaces
- Maintain minimum pavement widths
- Consider retrofitting strategies to minimise pavement clutter
- Phase out and remove staggered barriers and other obstructions to people with mobility aid and pushchairs
- Retrofit informal crossings with dropped kerbs or raised tables, where possible
- RNIB/GDBA recommends 60mm kerb edge as a minimum and the same application of tactile paving for pedestrian crossings
- Flush kerbs still require a raised kerb section for retractable ramps for black taxis and bus stops

Recommended Pledges

Commitment to pledges can raise public awareness and promote active learning within local authorities in recognising and addressing accessibility issues. Many local authorities have already signed up to pledges set out by the government and other accessibility groups, which sets out useful principles that can inform more inclusive design and management (e.g. cleaning, licensing) strategies. Below are relevant pledges that planners and designers can refer to enhance accessibility beyond minimum standards:

- Women's Night Safety Charter
- Equal Pavements Pledge
- Cut the Clutter Campaign

Understanding Accessibility in Context

Place and Pace

The key accessibility issues affecting highways and footways today are often intersectional and cannot be addressed in isolation. Accessibility for all should not only stop at the navigability of space, but the full spatial and synaesthetic experience. A human-focused understanding of site context, beyond technical analysis (e.g. traffic modelling), is key for designers, highways engineers and planners in developing shared visions that responds to pace and occupation and that identifies and mitigates accessibility issues.

The Place-Pace tool can be used to appraise existing conditions, plan new schemes and also, assess them after implementation. A comprehensive analysis is both critical for consultation to identify gaps in knowledge and for making and communicating design decisions.

This tool is designed to have a direct correlation with TfL's existing Healthy Streets model and offers criteria to help achieve designs which meet the 10 Healthy Streets Indicators. Whilst Healthy Street Indicators is a more traditional quantifiable assessment tool, the Place-Pace tool is designed to serve a broader purpose in analysis and design development.

The Place-Pace Analysis tool interrogates three themes (read clockwise from 12 o'clock mark):

1. City Network Theme

This family of criteria seeks to spatially map the context area of study; this includes understanding the role of a place in the wider network, the modal sharing of space and desire lines through the space.

2. Activity Theme

This family of criteria documents the temporal qualities of the space in terms of how the activity within and around the space changes over the course of a day, week or year.

3. Behaviour Theme

This family of criteria seeks to document how different users experience the public realm.

Using the Place-Pace Analysis Tool

1. Contextualising site in the wider city network

- What is the commonly understood map of this area?
- What are the rules of the road?
- What are the routes people choose to take?

2. Understanding temporal activity

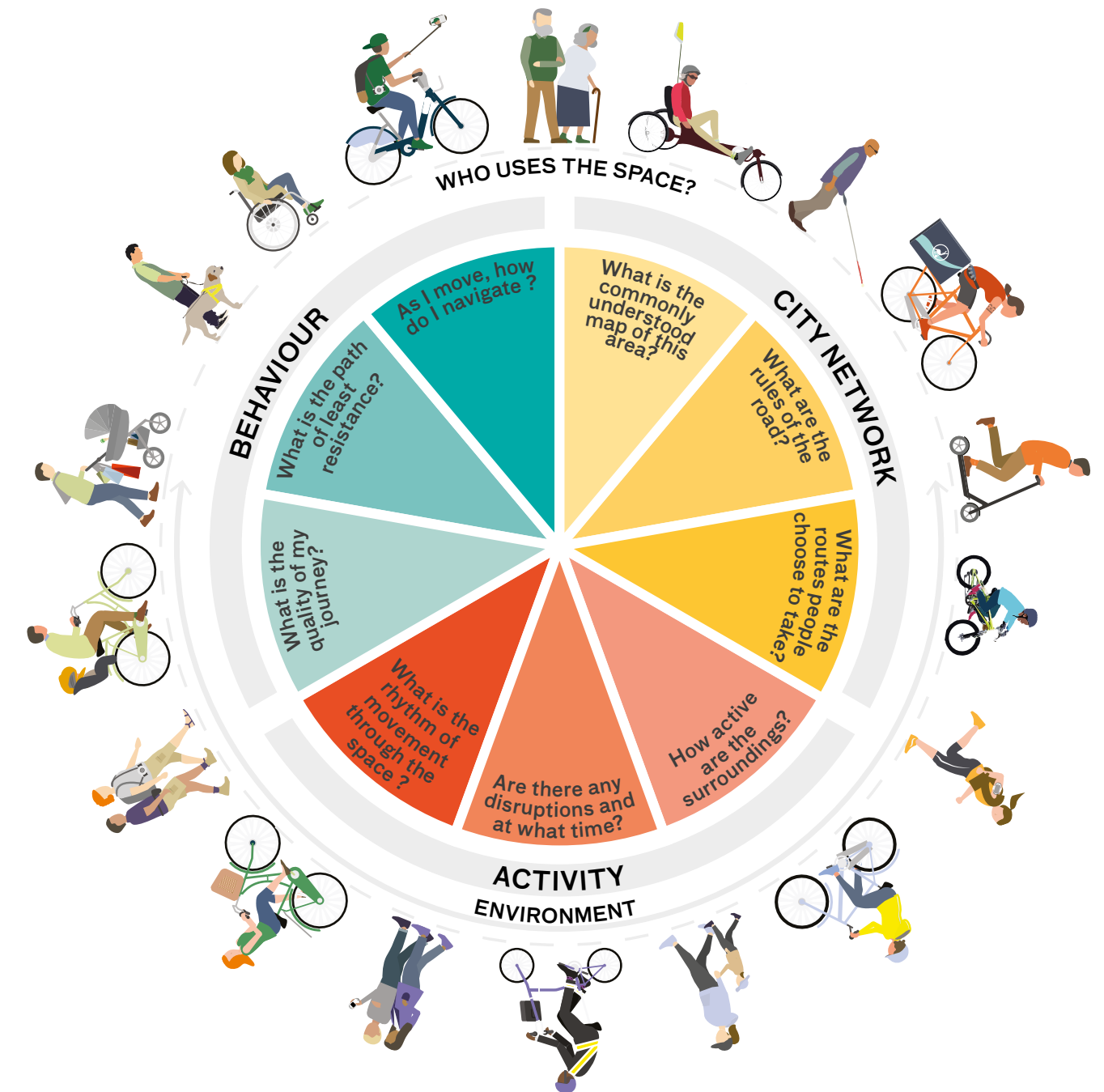
- How active are the surroundings?
- Are there any disruptions and at what time?
- What is the rhythm of movement through space?

3. Identifying user behaviour and experience

- What is the quality of my journey?
- What is the path of least resistance?
- As I move, how do I navigate?

Fig 45. The Place-Pace Tool was developed by DSDHA as part of the 1851 Royal Commission Research Fellowship: 'Sharing the Beautiful Everyday Journey', previously published in the NLA and shared with local authorities across London.

Tool #1 Place-Pace Analysis & Design



The Place-Pace Tool is to be read clockwise from the 12 o'clock mark, covering three themes – city network, activity and behaviour.

Tool #2

Evaluation

Safety

Has safety been considered for all user groups, especially the old, the young, women and those with disabilities?

Inclusivity

How does this scheme consider and address the needs of different user groups?

Comfort

Does the scheme provide a comfortable user experience?

Legibility

Is this scheme intuitively legible for a diverse range of user groups?

Attractiveness

Is the scheme inviting and welcoming for a diverse range of user groups?

Directness

Does this scheme enable convenient movement?

Safety

Highways and footways should be safe and feel safe at all times of the day. Safety issues for protected groups within the 2010 Equality Act are usually disproportionally higher and these should be specifically considered and addressed.

Inclusivity

Inclusive design principles should be adhered to ensure that accessibility is not compromised for certain neglected user groups. Social and cultural barriers should also be considered through consultation and addressed where possible.

Comfort

Desire lines and pedestrian comfort levels should be considered to allow for unhindered movement by all user groups and for users to take different journeys according to their needs.

Legibility

Highway and footway transitions, routes, street furniture and wayfinding should all be easily understood for all. Greater considerations should be made for the blind and partially sighted, people with accessibility issues and neurological conditions.

Attractiveness

Highways and footways should be inviting and welcoming spaces for all. Intersectional with Healthy Street (TfL) aspirations, lighting, planting and material decisions can all contribute to the spatial experience and wellbeing of users.

Directness

Routes should be logical and direct whilst addressing any potentially competing desire lines and behaviour of different user groups.

The evaluation tool outlined on the opposite page is created based on the two pieces of TfL guidance, one focused on walking, the other cycling.

Transport for London's 'The Planning for Walking Toolkit' sets out seven principles that make a pedestrian network successful: Safe, Inclusive, Comfortable, Direct, Legible, Connected and Attractive.

In comparison, 'London Cycling Design Standards' outlines six categories to measure a scheme by: Safety, Directness, Comfort, Coherence, Attractiveness and Adaptability.

The two sets of categories are consolidated for the evaluation of highways and footways accessibility to take into account user groups of different modes of mobility.

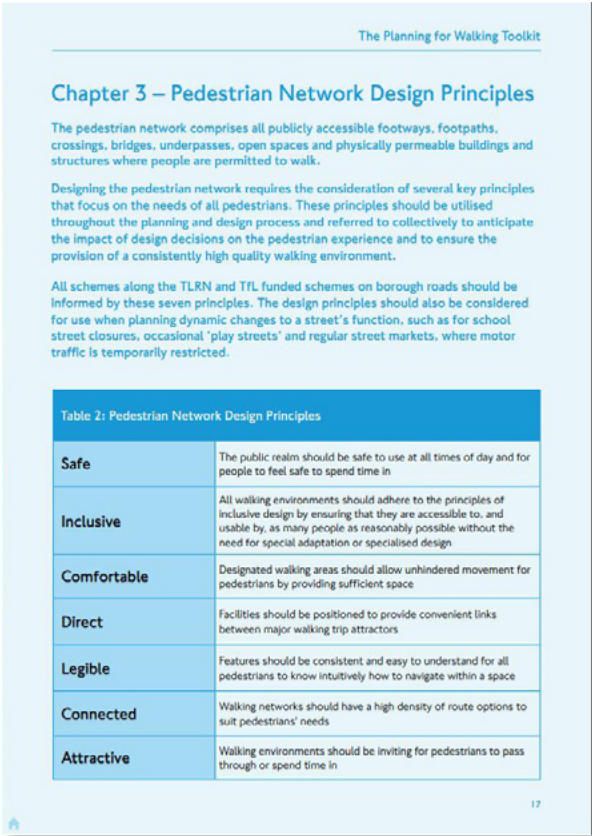


Fig 46. TfL's Planning for Walking Toolkit's existing criteria for Pedestrian Networks.



Fig 47. TfL's existing criteria for London Cycling Design Guidance.

Key Recommendations

Strategic Planning & Analysis

- Every site is different. Each scheme must develop a site-specific approach to understand local issues, user behaviour and needs. Whilst each site generally prioritises a primary mode of transport or use, these should be carefully balanced with secondary modes, without compromising safety and accessibility of all users.
- Site analysis needs to be more comprehensive in order to cover different conditions highways and footways are subject to throughout the day and year (e.g. 6pm-6am, special events).
- Rebalance highway and footway space to provide wider pavements and crossings where possible to align with the principles of the 'road user hierarchy' introduced recently to the Highway Code in prioritising pedestrians, especially vulnerable and disabled people.

Consultation

- Consultation with national, regional and local groups representing young people, women, people with disabilities and protected characteristics is key, especially when implementing in pilot schemes and new road typologies.
- Thorough EIAs should be conducted for every highways and footways scheme to ensure that they are safe and accessible to all user groups. Retrospective equalities analysis should be conducted for experimental schemes if consultation has previously not been undertaken.
- Safety audits can become a powerful consultation tool in addressing female & LGBTQ+ safety and accessibility for people with disabilities, neurodiverse and other vulnerable groups.

Design and Delivery

- Cross-departmental collaboration (e.g. parks, licensing, lighting teams) and knowledge sharing with PCSOs are key to identifying local sensitivities and design solutions.
- Hybrid solutions – physical infrastructure & management plans – are key to the success and longevity of schemes.
- Timed strategies and phased project delivery can be considered to maintain flexibility and manage behavioural transitions.
- Partnerships with stakeholders in both public and private sectors for knowledge sharing, funding and collaboration should be considered especially where a management strategy is needed to support physical infrastructure.

Monitoring & Knowledge Sharing

- Monitoring user behaviour and emerging trends in existing schemes and experimental trials is key to informing adjustments and improvements.
- Knowledge sharing of technical and design details, empirical findings and lessons learnt for emerging issues with other local authorities to improve consistency across London to reduce confusion for users especially people with disabilities.

Glossary

Highways

While there is no definitive statutory definition of a highway, common law defines it as a way over which the public has the right to pass. For the purpose of this guidance, it will be referred to as the Department of Transport's definition of 'carriageway', as a road.

Footways

In legislation the 'pavement' is defined as the 'footway'. For the context of this guidance, it will be referred to as the 'footway'. Not to be confused with 'footpath', which refers to a conditions that does not necessarily border a road.

Road Safety Audit

A formal safety performance examination of existing or future roads or interactions by an independent team. It estimates and reports potential road safety issues and identifies opportunities for improvement for all road users.

Safety Audit

A consultation and site analysis methodology in which relevant parties contribute to qualitative assessment and quantitative data for a particular site. Examples include female-led safety audits and app-based safety audits via My Safetipin.

24-Hour Strategy

Strategies should not be limited by the artificial distinctions of daytime and night time, but consider the full spectrum of light conditions, including seasonality, natural and artificial light.

Gender Mainstreaming

Defined by the UN Women as 'the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels.'

Voice Opportunity Power

A toolkit to involve young people in the making and managing of their neighbourhoods. Formed by ZCD Architects, Grosvenor, tcpa and Sport England, the toolkit has five sessions to engage young people during RIBA workstages 1, 2 and 5.

Risk-Benefit Assessment

An assessment to assist play designers and providers in balancing the benefits of activity with any inherent risk. Taking account of risks, while recognising the benefits to young people for their development.

Designing for Neurodiversity

Designing for Neurodiversity refers to the inclusive design principles for all neurological states. From the neurotypical to neurodivergent and neurodegenerative, everyone is within the spectrum and can benefit from its consideration in the design process.

Shared Use

Defined in 'Cycle Infrastructure Design LTN 1/20' (2020) as: 'a route or surface which is available for use by both pedestrians and cyclists'.

Shared Surface

Defined in PAS 6463:2021 as: 'urban design approach that minimizes the segregation between modes of road user by removing features such as kerbs, road surface markings, traffic signs and traffic lights'.

People on Cycles

The universal term of 'cyclists', connotes a singular riding group operating at certain speed. 'People on cycles' is a more inclusive terminology and can be used where possible. Wheels for Wellbeing also recommend that 20% of all cycle iconography should depict alternative cycles to represent the 20% of disabled people living in the UK.

Non-Standard Cycles

This refers to the wide range of cycles types, including; Recumbent, Tandem, Tricycle, Trailer bike, Cargo bike, Hand cycle and many more configurations.

Cycle Design Vehicle

A term coined by Highways England to refer to the average dimension that captures the wide range of cycles beyond the standard bicycle. The 'cycle design vehicle' is 2.8m long and 1.2m wide.

Flexible Loading and Parking Bays

These are loading and parking pads created often in the same or similar materiality to the main footway which can be used by pedestrians in the absence of kerbside activity.

Night Time Enterprise Zone

Night Time Enterprise Zones are places where extended opening hours for shops and services (past 6pm) can be tested and evaluated. These initiatives may involve timed road closures to facilitate events and alternative uses of the high street.

Synchronised Crossing

Defined within this document as a pedestrian crossing that stops all vehicular movement at a junction contemporarily, allowing all pedestrian movement to occur at the same time. It is also referred to colloquially as a 'pedestrian scramble' crossing.

Endnotes

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- p32 4: [Ministerial letter regarding shared space, 28 September 2018](#)
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Resources

- 1.1.1 [Sexual harassment of women and girls in public places](#), Women and Equalities Committee, 2018
- 1.1.2 [Building for Equality: Disability and the Built Environment](#), Women and Equalities Committee, 2017
- 1.2.1 [Manual for Streets](#), Department for Transport, 2007
- 1.2.2 [Accessible Public Realm, Annex 3 - ageing dementia and non-visible disability](#), Department for Transport, 2020
- 1.2.3 [Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure](#), Department for Transport, 2021.
- [Guidance on the use of Tactile Paving Surfaces](#), Department of the Environment, Transport and the Regions, 1998
- 1.2.5 [Shared Use Routes for Pedestrians and Cyclists, Local Transport Note \(1/12\)](#), Department for Transport, 2012
- 1.2.4 [A Gear Change: A bold new vision for cycling and walking](#), Department of Transport, 2020
- [Cycle Infrastructure Design, Local Transport Note \(1/20\)](#), Department of Transport, 2020
- 1.3.1 [BS 5489-1:2020, Design of road lighting](#), British Standards Institute, 2020
- 1.3.2 [BS 6463, Design for the mind – Neurodiversity and the built environment](#), British Standards Institute, 2020
- 1.4.1 [Cycle Traffic and the Strategic Road Network](#), Highways England, 2016
- 2.1.1 [Night Time Strategy: Part 1 + 2](#), Mayor of London, 2020
- 2.1.2 [Women's Night Safety Charter Toolkit](#), Mayor of London, 2019
- 2.1.3 [Making London Child Friendly](#), Mayor of London, 2019
- 2.1.4 [Mayor of London Pause on Colourful Crossings](#), Transport for All, 2021
- 2.1.5 [London Cycling Design Standards](#), Transport for London, 2014
- 2.1.6 [Pedestrian Comfort Guidance for London](#), TfL, 2019
- 2.1.7 [Kerbside Loading Guidance](#), TfL, 2017
- 2.2.1 [Meaningful Monitoring: Providing the Path to Positive Change](#), Cross River Partnership, 2021
- 2.3.1 [Seeing clearly: How lighting can make London a better city](#), Centre for London, 2021
- [Toolkit for lighting design](#), Centre for London, 2021
- 2.3.2 [Reclaim the Kerb: The Future of Parking and Kerbside Management](#), Centre for London, 2020
- 3.1.1 [Streetscape Design Manual](#), Camden Council
- 3.1.2 [Streetscape Design Manual](#), Camden Council
- 3.2.1 [Light + Darkness in the City: A lighting vision for the City of London](#), City of London Corporation, 2018
- 3.2.2 [Public Realm Technical Manual](#), City of London, 2016
- 3.2.3 [City of London Transport Strategy](#), City of London, 2019
- 3.2.4 [City of London Transport Strategy](#), City of London, 2019
- 3.2.5 [City of London Transport Strategy](#), City of London, 2019
- 3.3.1 [Hackney School Streets Toolkit](#), Hackney Council, 2021
- 3.3.2 [Hackney Sustainable Transport Strategy](#), Hackney Council, 2014
- 3.4.1 [Streetbook Supplementary Planning Document](#), Islington Council, 2012
- 3.4.2 [Streetbook Supplementary Planning Document](#), Islington Council, 2012
- 3.4.3 [Islington Draft Transport Strategy](#), Islington Council, 2021
- 3.4.4 [Islington Urban Design Guide](#), Islington Council, 2021
- 3.5.1 [Lambeth Local Plan](#), Lambeth Council, 2021
- 3.5.2 [Lambeth Local Plan](#), Lambeth Council, 2021

Resources

- 3.6.1 [DRAFT Lewisham Local Plan](#), Lewisham Council, 2021
- 3.6.2 [DRAFT Lewisham Local Plan](#), Lewisham Council, 2021
- 3.7.1 [Transport and Streets, Supplementary Planning Document](#), Royal Borough of Kensington and Chelsea, 2016
- 3.7.2 [Transport and Streets, Supplementary Planning Document](#), Royal Borough of Kensington and Chelsea, 2016
- 3.7.3 [Local Plan](#), Royal Borough of Kensington and Chelsea, 2019
- 3.8.1 [Southwark Streetscape Design Manual](#), Southwark Council, 2020
- 3.8.2 [Southwark Streetscape Design Manual](#), Southwark Council, 2020
- 3.8.3 [Southwark Streetscape Design Manual](#), Southwark Council, 2020
- 3.9.1 [Draft Local Plan](#), Wandsworth Council, 2021
- 3.10.1 [Westminster Lighting Design Guide](#), City of Westminster, 2020
- 3.10.2 [Pedestrian Comfort Guidance](#), City of Westminster, 201
- 3.10.3 [Westminster Way - Public Realm Strategy](#), City of Westminster, 2011
- 3.10.4 [Freight, Servicing and Deliveries Strategy and Action Plan 2020–2040](#), City of Westminster, 2020
- 4.1.1 [Cut the Clutter](#), Living Streets, 2021
- 4.1.2 [Pavement Parking](#), Living Streets, 2021
- 4.2.1 [Pave the Way](#), Transport for All, 2021
- 4.2.2 [Pave the Way](#), Transport for All, 2021
- 4.2.3 [Pave the Way](#), Transport for All, 2021
- 4.2.4 [Equal Pavements Pledge](#), Transport for All, 2021
- 4.3.1 [Inclusive Cycling Guide](#), Wheels for Wellbeing, 2020
- 4.3.2 [Inclusive Cycling Guide](#), Wheels for Wellbeing, 2020
- 4.4.1 [Seeing Streets Differently](#), Royal National Institute of Blind People, 2021
- 4.4.2 [Seeing Streets Differently](#), Royal National Institute of Blind People, 2021
- 4.4.3 [Seeing Streets Differently](#), Royal National Institute of Blind People, 2021
- 4.5.1 [Children and young people with vision impairment](#), Guide Dogs for the Blind Association, 2021
- 4.5.2 [Streets Ahead](#), Guide Dogs for the Blind Association, 2021
- 4.5.3 [E-scooters Campaign](#), Guide Dogs for the Blind Association, 2021
- 4.5.4 [Blocked In: the impact of Pavement Parking](#), Guide Dogs for the Blind Association, 2020
- [Access Denied](#), Guide Dogs for the Blind Association, 2019
- 4.6.1 [Lighting Against Crime](#), Secured by Design, 2011
- 4.6.2 [Lighting Against Crime](#), Secured by Design, 2011
- 4.6.3 [Standards for public cycle parking](#), Bicycle Association, Sustrans and Secured By Design, 2021
- 4.7.1 [Scoping Study-London's participation in UN Women's Safer Cities and Safe Public Spaces Programme](#), UCL Urban Lab, 2020
- 4.8.1 [Neurodiversity in Planning: Engagement Toolkit](#), becrg, 2021
- 4.9.1 [Make Space for Girls](#), Make Space for Girls, 2020
- 4.10.1 [An introductory guide to low traffic neighbourhood design](#), Sustrans, 2020

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