

A vibrant street scene in Halifax, showing a mix of pedestrians and a cyclist. In the foreground, a woman in a blue jacket walks on the left, while a man in a brown shirt and light blue jeans walks towards the center. To the right, a woman in a dark blue hoodie is riding a green bicycle. The background is filled with more people walking, some pushing strollers, and buildings with various signs, including 'Card Factory' and 'HALIFAX'. The scene is bright and sunny, with shadows cast on the pavement.

STREET IMPROVEMENT MANUAL

**Practical ideas for local councils tackling
Climate Change & Decarbonising Transport
Public Health, Obesity, COVID**

Legal and Technical

INTRODUCTION

Objectives of this Guidance

An evolving reference source on current best practice to support central and local government and any other organisations or groups developing or deploying their own guidance.

To provide local authorities with ideas and assistance in transforming their streets so that they are safe for pedestrians and cyclists of all ages and abilities, and will support the social and economic life of the community.

Standard design ideas for standard street widths produced by the UK's leading engineers and urban designers

- Short term measures - quick, light, cheap - but capable of being permanent
- Permanent measures that will help local authorities to meet public health, air quality and carbon objectives

Answers to common questions faced by local authorities

Guidance on law including the Common Law, Statutory Duties, and Statutory Guidance (England)

Add to this guidance

This document is an evolving and collaborative manual. Help us make it better: - please consider contributing your own ideas for improvement, solutions to common problems, or entirely new sections.

Email street.improvement@gmail.com

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The work is facilitated by the Urban Design Group registered charity 326123.

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Crossings

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Public Realm Information and Advice Network

Junctions

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Options for 24ft and 30ft carriageways (7.3 and 9.3 metres)

Graham Smith

Shopping Streets

David McKenna, Street Spirit

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Objectives for improving streets

Objectives are to be found in Acts of Parliament as statutory duties, along with national strategies and plans, and local authority corporate strategies. Examples include:

Climate change - 2050 Net Zero Target - **Climate Change Act 2008** as amended by the (2050 Target Amendment) Order 2019

Transport decarbonisation plan to be published later in 2020

Active Travel - **Gear Change Cycling and Walking Plan for England**

Street Trees - National Tree strategy - currently under **consultation**

Flood Risk Management and Sustainable Drainage (SuDS)

Health - Each local authority **must** take such steps as it considers appropriate for improving the health of the people in its area. **Health and Social Care Act 2012 S12**

Obesity - **Obesity Strategy**

Air pollution - Local authorities **must** undertake reviews of air quality and where air quality standards and objectives are not being achieved, must designate air quality management areas, and prepare an action plan which **must** have regard to the statutory guidance. See Environment Act 1995 Part IV and Local Air Quality Management Policy Guidance **PG09 (PG16)** DEFRA **Clean Air Strategy 2019**

Equality - Councils, under the Equality Act 2010 **Public Sector Equality Duty**, in the exercise of their functions (and private companies providing public services), **must** have due regard to the need to advance equality of opportunity of people with **protected characteristics** under the Equality Act 2010, including elderly people, disabled people, and people of different gender. "Due regard" means a vigorous and open-minded inquiry before settling upon a course of action. *Ali v Newham EWCA 2012*. In making strategic decisions Councils **must** have due regard to reducing the inequalities of outcome which result from socio-economic disadvantage. **Equality Act Section 1**

Crime - Councils **must** have due regard to the likely effect of the exercise of their functions on, and the need to do all that they reasonably can to prevent, crime and disorder in their area (including anti-social and other behaviour adversely affecting the local environment); drug misuse, and reoffending. **Crime and Disorder Act 1998 S 17**

Clean Streets - Councils **must** observe the **Code of Practice on Litter and Refuse**, keeping streets, highways and areas of public land clean in accordance with the standards set out in the code.

Local authority corporate plans - should directly inform the way in which streets are managed and improved. They generally cover jobs, health, equalities and the protection of the environment.

Streets are fundamental to normal life, and have a fundamental role to play in addressing society's problems, and providing opportunities. There are few areas of policy that do not require streets in some way.

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Statutory Powers - Statutory Duties - Regulations

Highway authorities have an extensive range of statutory powers and legal instruments available to them, which should be used to put into effect the actions required by legislation, strategies, policies and guidance.

In legislation, the word:

must - creates a statutory duty

may - creates a statutory power

Statutory Duties - fall into two categories:

Specific or private law duties - which are owed to individuals and over which an individual may take legal action if they suffer injury or loss – examples include the duty to maintain the highway under the Highways Act 1980

General or public law duties. These are general duties owed to society as a whole. They are sometimes described as target duties. Examples include the Duty to improve road safety under the Road Traffic Act 1988. The individual generally has no remedy in law for loss arising from the failure of a local authority to discharge one of these duties. However decisions can be challenged via the Local Government Ombudsman, or via Judicial Review.

Regulations, where they apply, must be observed.

Statutory guidance must be followed, unless there are clear and cogent reasons not to.

Non-statutory guidance is advisory, but there may be instances where it is negligent not to follow it. Guidance includes:

- **Traffic Signs Manual**
- **Manual for Streets**
- **Design Manual for Roads and Bridges** (required on roads operated by Highways England, Transport Scotland, and the Welsh Government)
- Local Transport Notes eg **LTN01/20 Cycle Infrastructure Design**

Professional codes of conduct

Most professional codes of conduct, state that professionals **must not** work in areas in which they are not competent. Competence includes keeping up-to-date with all relevant developments in the field of work being undertaken. Hence, a failure to use current guidance, without good reason, may constitute a breach of a professional code of conduct. Work undertaken in breach of a professional code of conduct may not be covered by Professional Indemnity insurance.

Additional requirements include requirements that professionals:

- **must** ensure that any advice given is accurate, independent, unbiased and professionally sound;
- **must not** knowingly mislead others in technical or professional matters.
- **must not** offer advice beyond their area of competence.

Examples of Codes

CIHT Code of Professional Conduct

ICE Code of Professional Conduct

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THE DUTY TO ACT

Summary of the legal position

1. While there is an unequivocal duty on local authorities to act
2. The statutory guidance issued under the Traffic Management Act 2004 applies to the Network Management Duty, implying that the measures must be network-wide
3. Few resources - implies the need for quick, light and cheap measures.

Consequences of Inaction

If the new statutory guidance is not followed without good reason, or statutory duties not discharged, remedies include

- Local Government Ombudsman
- Judicial Review

Liability

Where injuries or deaths occur in part through the inaction of the highway or traffic authority, and it can be established that there was a duty of care, the authority will become liable.

An auditable trail of decisions should be kept.

Why there is a duty to act

1. The government has required citizens to observe guidelines on social distancing. Observing these guidelines may lead them into danger. The Section 122 duty under the Road Traffic Regulation Act 1984 requires local authorities to exercise the functions conferred on them by the act to secure the safe movement of vehicular and other traffic (including pedestrians), so far as is practical. This is a positive duty to act to mitigate the danger.
2. The statutory guidance issued by the Department for Transport: **Traffic Management Act 2004: network management in response to COVID-19** requires a range of measures to be undertaken to mitigate those risks, to enable business to restart, and to prepare the way for long term objectives such as active travel, carbon dioxide emission reduction and improvements to air quality.

Local authorities are required to follow the path charted by the Secretary of State's guidance; they may deviate from it where there is good reason, but they do not have the freedom to take a substantially different course.

The Local Authority owes a duty of care to both careful and negligent road users when it exercises its highway and traffic powers.

It is bound by the Public Sector Equality Duty. do so may do may invalidate professional indemnity insurance.

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Traffic Management Act 2004 - Network Management Duty

As informed by the new Statutory Guidance issued under Section 18

Highways Act 1980

S66 (1) duty to provide in or by the side of a highway a proper and sufficient footway where considered necessary or desirable for the safety or accommodation of pedestrians;

S66 (4) power to alter or remove them;

Road Traffic Regulation Act 1984

S122 Exercise of functions by local authorities.

(1) It shall be the duty of every local authority upon whom functions are conferred by or under this Act, so to exercise the functions conferred on them by this Act as (so far as practicable having regard to the matters specified in subsection (2) below) to secure the expeditious, convenient and safe movement of vehicular and other traffic (including pedestrians)...

Public Sector Equality Duty – Equality Act 2010 S149

(1) A public authority must, in the exercise of its functions, have due regard to the need to -

(a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;

(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;

Protected characteristics include: age; gender; disability

“Due Regard” means... an essential preliminary to a decision necessitating a substantial, vigorous and open minded approach; where consideration is given to measures to avoid adverse impact before fixing on a solution.

Road Traffic Act 1988 – S39

Each authority must prepare and carry out a programme of measures designed to promote road safety

must carry out studies into accidents arising out of the use of vehicles

must, in the light of those studies, take such measures as appear to the authority to be appropriate to prevent such accidents...

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Duty to Maintain the Highway

They **must** inspect and repair footways and carriageways to a reasonable standard[1]

Highways Act 1980 Section 41 and Common Law

Common Law Duty of Care

Each authority owes a duty to all road users (whether careful or negligent) to use reasonable care in the manner in which it exercises its powers (derived from Section 39 of the Road Traffic Act 1988)

There are many other statutory duties which should guide the actions of local authorities

Public health: Health and Social Care Act 2012

Each local authority **must** take such steps as it considers appropriate for improving the health of the people in its area.

Each council **should** consider the available research evidence on health and wellbeing and use the full range of their powers in all the services it provides, to make improvements. It **should** consider practical measures such as tree planting, urban greening, provision of parks, play areas and public spaces, and pedestrian and cycling routes. It **should** consider how changes to operation of core functions such as highways, waste collection, education, social care and corporate services can contribute to healthy places.

Clean air: Environment Act 1995 Part IV

Local authorities **must** undertake reviews of air quality and where air quality standards and objectives are not being achieved, must designate air quality management areas, and prepare an action plan[1] which **must** have regard to the statutory guidance. (Local Air Quality Management Policy Guidance (PG16) DEFRA 2016)

Decisions

Councils, in all decisions made, **must** act reasonably, taking into account those things that should be taken into consideration and not taking into account those things that should not be taken into consideration.[1]

Wednesbury Test, Associated Provincial Picture Houses Ltd. v Wednesbury Corporation [1948] 1 KB 223

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WHEN TO USE TRAFFIC ORDERS

Highway authorities have an extensive range of statutory powers and legal instruments available to them, which should be used to put into effect the actions required by Statutory Duties, and the Statutory Guidance.

Relevant legislation

The Road Traffic (Temporary Restrictions) Procedure Regulations 1992

The Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996

The Secretary of State's Traffic Order (Procedure) (England and Wales) Regulations 1990

Use the authority's statutory powers

- Widening footways
- Widening cycle lanes
- Creating advisory cycle lanes
- Creating mandatory cycle lanes (the line is the order)
- Maintaining the highway - which could include using different surfacing materials to indicate different priorities
- Introducing traffic calming

Get a Traffic Order

- Restricting streets by time of day or types of traffic (eg HGVs)
- Closing streets
- Changing a speed limit (other than reducing 50/40 to 30 in a lit area)

Revoke a Traffic Order

- Changing a 40mph limit on a street with street lighting to the default 30mph limit

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Traffic Management Act 2004: network management in response to COVID-19

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Statutory Guidance was issued under Section 18 of the Traffic Management Act 2004, by the State Secretary of Transport on the 9th of May 2020.

Local authorities are expected *“to make significant changes to their road layouts to give more space to cyclists and pedestrians” and that “measures should be taken as swiftly as possible, and in any event within weeks, given the urgent need to change travel habits before the restart takes full effect.”*

LEGAL SIGNIFICANCE OF STATUTORY GUIDANCE

Parliament requires local authorities to follow the path charted by the Secretary of State’s guidance, *“with liberty to deviate from it where the local authority judges on admissible grounds that there is good reason to do so, but without freedom to take a substantially different course.”*
R v Islington LBC ex p Rixon [1998] 1 CCLR 119

The Statutory Guidance, combined with the existing statutory duties, implies a duty to act, “within weeks” and the measures must be network-wide.

Contents

- A ministerial foreword
- High level principles
- Timing : *“Measures should be taken as swiftly as possible, and in any event within weeks, given the urgent need to change travel habits before the restart takes full effect.”*
- Reallocating road space – a list of measures
- list of the traffic orders

Ministerial Foreword - Key Points

*“We recognise this moment for what it is: a once in a generation opportunity to deliver a lasting transformative change in how we make short journeys in our towns and cities. According to the **National Travel Survey**, in 2017-18 over 40% of urban journeys were under 2 miles – perfectly suited to walking and cycling.*

“Active travel is affordable, delivers significant health benefits, has been shown to improve wellbeing, mitigates congestion, improves air quality and has no carbon emissions at the point of use. Towns and cities based around active travel will have happier and healthier citizens as well as lasting local economic benefits.

“The government therefore expects local authorities to make significant changes to their road layouts to give more space to cyclists and pedestrians. Such changes will help embed altered behaviours and demonstrate the positive effects of active travel.”

THE STATUTORY GUIDANCE

SUMMARY 2

Traffic Management Act 2004: network management in response to COVID-19

High level principles

“Local authorities in areas with high levels of public transport use should take measures to reallocate road space to people walking and cycling, both to encourage active travel and to enable social distancing during restart.”

“Local authorities where public transport use is low should be considering all possible measures.”

“Measures should be taken as swiftly as possible, and in any event within weeks, given the urgent need to change travel habits before the restart takes full effect.”

Reallocating Road space – a list of measures

- ‘pop-up’ cycle facilities
 - converting traffic lanes into temporary cycle lanes (suspending parking bays where necessary);
 - widening existing cycle lanes to enable cyclists to maintain distancing.
- Widening footways, pedestrian crossings and refuges
- Encouraging walking and cycling to school, for example through the introduction of more ‘school streets’
- Reducing speed limits: 20mph speed limits – supported by other measures.
- Pedestrian and cycle zones
- Modal filters
- Cycle parking facilities
- Changes to junction design to accommodate more cyclists
- ‘Whole-route’ approaches to create corridors for buses, cycles and access only on key routes into town and city centres.
- Identifying and bringing forward permanent schemes already planned

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SUMMARY 3

Traffic Management Act 2004: network management in response to COVID-19

A list of the procedures

- Under existing powers
- Using traffic orders:
 - Permanent
 - Experimental
 - Temporary

NB the procedures have been amended by temporary regulation so that there is no need to advertise in Local Newspapers

Other

“The public sector equality duty still applies, and in making any changes to their road networks, authorities must consider the needs of disabled people and those with other protected characteristics.”

The guidance was updated on 23 May 2020 and will be reviewed after 3 months.

Links

[Traffic Management Act 2004](#)

[Network Management Duty Guidance](#)

[Network Management in Response to COVID-19 Statutory Guidance](#)

[Traffic Signs to Support Social Distancing](#)

Traffic Regulation Order Procedures

[The Road Traffic \(Temporary Restrictions\) Procedure Regulations 1992](#)

[The Local Authorities' Traffic Orders \(Procedure\) \(England and Wales\) Regulations 1996](#)

[The Secretary of State's Traffic Order \(Procedure\) \(England and Wales\) Regulations 1990](#)

[Traffic Signs Regulations and General Directions 2016](#)

Many authorities are using Experimental orders

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Network management duty guidance

This guidance is additional statutory guidance[1] issued by the Secretary of State for Transport under Section 18 of the **Traffic Management Act 2004** (“the act”)[2]. It applies to all highway authorities in England, who shall have regard to this guidance to deliver their network management duty under the act. It is effective from the date of publication.

It does not replace the original **Network Management Duty Guidance**[3] published in November 2004, but provides additional advice on techniques for managing roads[4] to deal with COVID-19 response related issues. It will be reviewed 3 months after publication.

The guidance sets out high-level principles to help local authorities to manage their roads and what actions they should take. Updates to this document or further guidance on related subjects may be published as the need is identified.

Notes

[1] **Statutory Guidance : Legal Status.**

Parliament requires local authorities to follow the path charted by the Secretary of State’s guidance, “with liberty to deviate from it where the local authority judges on admissible grounds that there is good reason to do so, but without freedom to take a substantially different course.” *R v Islington LBC ex p Rixon* [1998] 1 CCLR 119

[2] **The Traffic Management Act 2004 Section 16 Network Management Duty**

It is the duty of a local traffic authority or a strategic highways company (“the network management authority”)] to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives—

(a)securing the expeditious movement of traffic on the authority’s road network; and

(b)facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.

Traffic under this Act includes pedestrians

[3] **The Network Management Duty Guidance 2004**

“”expeditious movement of traffic” implies a network that is working efficiently without unnecessary delay to those travelling on it. But the duty is also qualified in terms of practicability and other responsibilities of the authority. This means that the duty is placed alongside all the other things that an authority has to consider, and it does not take precedence.”

[4] **Roads and the rights of the public**

“the public highway is a public place which the public may enjoy for any reasonable purpose, provided the activity in question does not amount to a public or private nuisance and does not obstruct the highway by unreasonably impeding the primary right of the public to pass and repass: **DPP v Jones and another House of Lords 1999.**

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Reallocating road space: measures

Local authorities in areas with high levels of public transport use should take measures to reallocate road space to people walking and cycling, both to encourage active travel and to enable social distancing during restart (**social distancing in this context primarily refers to the need for people to stay 2 metres apart where possible when outdoors**). Local authorities where public transport use is low should be considering all possible measures.

Measures should be taken as swiftly as possible, and in any event within weeks[1], given the urgent need to change travel habits before the restart takes full effect.

None of these measures are new – they are interventions that are a standard part of the traffic management toolkit[2], but a step-change in their roll-out is needed to ensure a green restart. They include:

Installing ‘pop-up’ cycle facilities with a minimum level of physical separation from volume traffic; for example, mandatory cycle lanes, using light segregation features such as flexible plastic wands; or quickly converting traffic lanes into temporary cycle lanes (suspending parking bays where necessary); widening existing cycle lanes to enable cyclists to maintain distancing. Facilities should be segregated as far as possible, i.e. with physical measures separating cyclists and other traffic. Lanes indicated by road markings only are very unlikely to be sufficient to deliver the level of change needed, especially in the longer term.

Notes

[1] “Measures should be taken....within weeks” – weeks means weeks, not months...

[2] Traffic Management Toolkit

The fundamental intention of law is to pursue the public interest, not to frustrate it. Highway and Traffic Authorities have extensive powers under the Highways Act 1980, and other related Acts to enable them to implement the Statutory Guidance. Eg:

Highways Act 1980

S 75 Power to vary widths of carriageways and footway

(1)Where a highway maintainable at the public expense comprises both a footway or footways and a carriageway, the highway authority may vary the relative widths of the carriageway and of any footway.

S 329 Further provision as to interpretation.

“footway” means a way comprised in a highway which also comprises a carriageway, being a way over which the public have a right of way on foot only;

Traffic Calming Regulations 1999

Section 3 Works which are traffic calming works: build-outs, chicanes, gateways, islands, overrun areas, pinch-points, or rumble devices or any combination of such works are traffic calming works.

Section 7 Features which may be included in Traffic Calming Works: lighting, paving, grass or other covering, pillars, bollards, planters, walls, rails or fences, objects or structures spanning the highway, or trees, shrubs or other plants.; for the purposes of making the traffic calming work conspicuous, enhancing the effect of the traffic calming work, promoting the safety of persons using the highway, or preserving or improving the environment through which the highway passes.

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/measures continued

Using cones and barriers: to widen footways along lengths of road, particularly outside shops and transport hubs; to provide more space at bus stops to allow people to queue and socially distance; to widen pedestrian refuges and crossings (both formal and informal) to enable people to cross roads safely and at a distance.

Encouraging walking and cycling to school, for example through the introduction of more 'school streets'. Pioneered in London, these are areas around schools where motor traffic is restricted at pick-up and drop-off times, during term-time. They can be effective in encouraging more walking and cycling, particularly where good facilities exist on routes to the school and where the parents, children and school are involved as part of the scheme development.

Reducing speed limits: 20mph speed limits are being more widely adopted as an appropriate speed limit for residential roads, and many through streets in built-up areas. 20mph limits alone will not be sufficient to meet the needs of active travel, but in association with other measures, reducing the speed limit can provide a more attractive and safer environment for walking and cycling.

Introducing pedestrian and cycle zones: restricting access for motor vehicles at certain times (or at all times) to specific streets, or networks of streets, particularly town centres and high streets. This will enable active travel but also social distancing in places where people are likely to gather.

/measures continued

Modal filters (also known as filtered permeability); closing roads to motor traffic, for example by using planters or large barriers. Often used in residential areas, this can create neighbourhoods that are low-traffic or traffic free, creating a more pleasant environment that encourages people to walk and cycle, and improving safety.

Providing additional cycle parking facilities at key locations, such as outside stations and in high streets, to accommodate an increase in cycling, for example by repurposing parking bays to accommodate cycle racks.

Changes to junction design to accommodate more cyclists – for example, extending Advanced Stop Lines at traffic lights to the maximum permitted depth of 7.5 metres where possible.

'Whole-route' approaches to create corridors for buses, cycles and access only on key routes into town and city centres.

Identifying and bringing forward permanent schemes already planned, for example under Local Cycling and Walking Infrastructure Plans, and that can be constructed relatively quickly.

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Other considerations

All these measures can be introduced temporarily, either in isolation or as a combined package of measures. Some interventions, including new lightly-segregated cycle lanes, will not require Traffic Regulation Orders (TROs). Others will require TROs, of which there are different types. The main ones are:

Permanent: this process includes prior consultation on the proposed scheme design, a 21-day notice period for statutory consultees and others who can log objections; there can be a public inquiry in some circumstances

Experimental: these are used to trial schemes that may then be made permanent. Authorities may put in place monitoring arrangements, and carry out ongoing consultation once the measure is built. Although the initial implementation period can be quick, the need for extra monitoring and consultation afterwards makes them a more onerous process overall.

Temporary: these can be in place for up to 18 months. There is a 7-day notice period prior to making the TRO and a 14-day notification requirement after it is made, plus publicity requirements. These are most suitable for putting in place temporary measures and road closures.

Emergency legislation came into force on 23 May 2020 to amend, temporarily, the:

The Road Traffic (Temporary Restrictions) Procedure Regulations 1992

The Local Authorities' Traffic Orders (procedure) (England and Wales) Regulations 1996

The Secretary of State's Traffic Order (procedure) (England and Wales) Regulations 1990

The amendments speed up making emergency Traffic Orders that may be needed to, for example, widen pavements or install cycle lanes. The main change is to the means of advertising the order, which can be via digital means. A second order still needs to be published for information 14 days later in a newspaper, where these are available, or via digital media.

The amendments also allow, for non-emergency Orders, alternative publicity arrangements to help deal with some practical difficulties that have arisen as a result of restrictions that are in place. For example, these might be where local newspapers have closed or have moved publications on-line or local authority offices are closed to the public, and there are concerns about the safety of staff posting site notices in some circumstances. The amendments will cease to have effect as of 30 April 2021

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Traffic signs may be needed to inform pedestrians, cyclists and drivers of changes to road layouts, particularly where temporary widening is in place. Advice on **using existing signing, and some new temporary designs**, will be published alongside this guidance. These are covered by the provisions of the **Traffic Signs Regulations and General Directions 2016** and as such do not need special signs authorisation from the department.

Authorities should monitor and evaluate any temporary measures they install, with a view to making them permanent, and embedding a long-term shift to active travel as we move from restart to recovery.

Access will still be required for other activities in the road, particularly street works, maintenance and other highway works, which will need to be balanced with work to reallocate road space to active travel. Street works and maintenance activity should carry on, as they will be essential to getting the economy going again. Use of the Street Manager digital service will help to plan and co-ordinate works.

Depending on the measures they are installing, authorities will also need to consider access for Blue Badge holders, deliveries and other essential services as appropriate.

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Authorities should seek input from stakeholders during the design phase. They should consult with the local chiefs of police and emergency services to ensure access is maintained where needed, for example to roads that are closed to motor traffic. Local businesses, including those temporarily closed, should be consulted to ensure proposals meet their needs when they re-open. Kerbside access should be enabled wherever possible for deliveries and servicing.

The public sector equality duty^[1] still applies, and in making any changes to their road networks, authorities must consider the needs of disabled people and those with other protected characteristics. Accessibility requirements apply to temporary measures as they do to permanent ones.

Notes

[1] Public Sector Equality Duty : Equality Act 2010

149 Public sector equality duty

(1) A public authority must, in the exercise of its functions, have due regard to the need to -

- (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
- (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
- (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

(2) A person who is not a public authority but who exercises public functions must, in the exercise of those functions, have due regard to the matters mentioned in subsection (1).

The duty requires public bodies to have “due regard”. Due regard under the Common Law means “an essential preliminary to a decision” necessitating “a substantial, vigorous and open minded approach”; where consideration is given to measures to avoid adverse impact before fixing on a solution. (Ali v Newham 2012)

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RECOMMENDED WIDTHS

- Streets, Carriageways and Footways
- Width and Speed - Manual for Streets
- Multi-use lanes
- Cycle lanes, footways, islands and refuges
- What lanes can accommodate

ACTUAL STREET WIDTHS

- Standard Widths
- High Streets and Main Streets
- 1960s to 2000s

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RECOMMENDED WIDTHS

Standard street, carriageway and footway widths

The vast majority of new roads and streets created after 1800 have been to standard widths, set down in Acts of Parliament, model byelaws, local byelaws, or government guidance.

The original aims of setting particular widths of street included the accommodation of vehicles of particular sizes, as well as the promotion of public health. There has also been a growing awareness that the width of a street affects other things, such as the speed of traffic, the convenience for cyclists and pedestrians, and the safety of the public as a whole, including children, elderly people and people with disabilities.

The standard widths and geometry used in the past may be neither safe nor appropriate for the 21st century. The use of such standards may be unlawful if the needs of disabled and elderly people have not been considered, and negligent if it creates an environment which children cannot safely use.

The research that provided the evidence base for Manual for Streets, concluded that the width of speed affects drivers' speed choice.

(see next page for the full size graph taken from Transport Research Laboratory Report 661)

Current publications offering guidance on widths

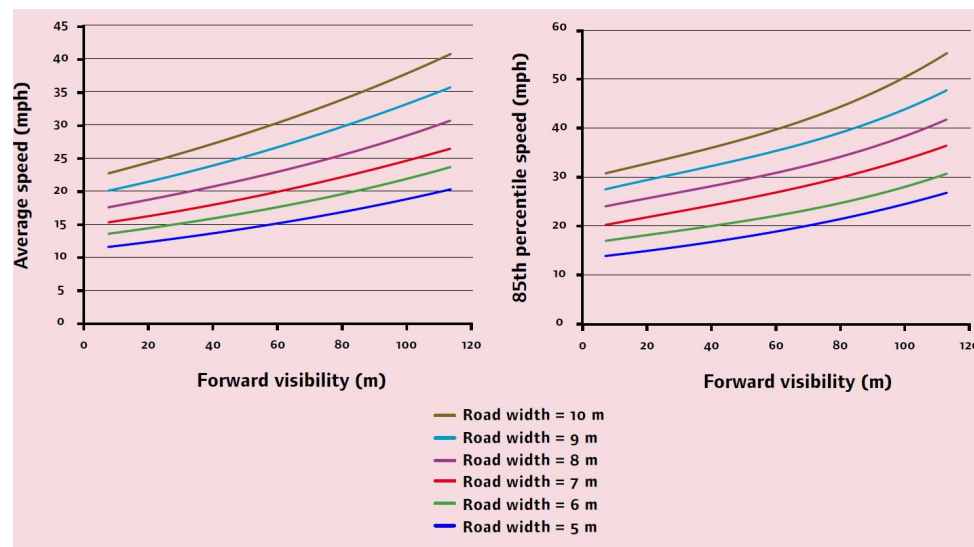
- Transport Research Report 661 - Evidence base for Manual for Streets
- Manual for Streets 1
- Manual for Streets 2
- Traffic Signs Manual Chapter 6 2019
- London Cycle Design Standards
- Local Transport Note 01/20 - Cycle Infrastructure Design

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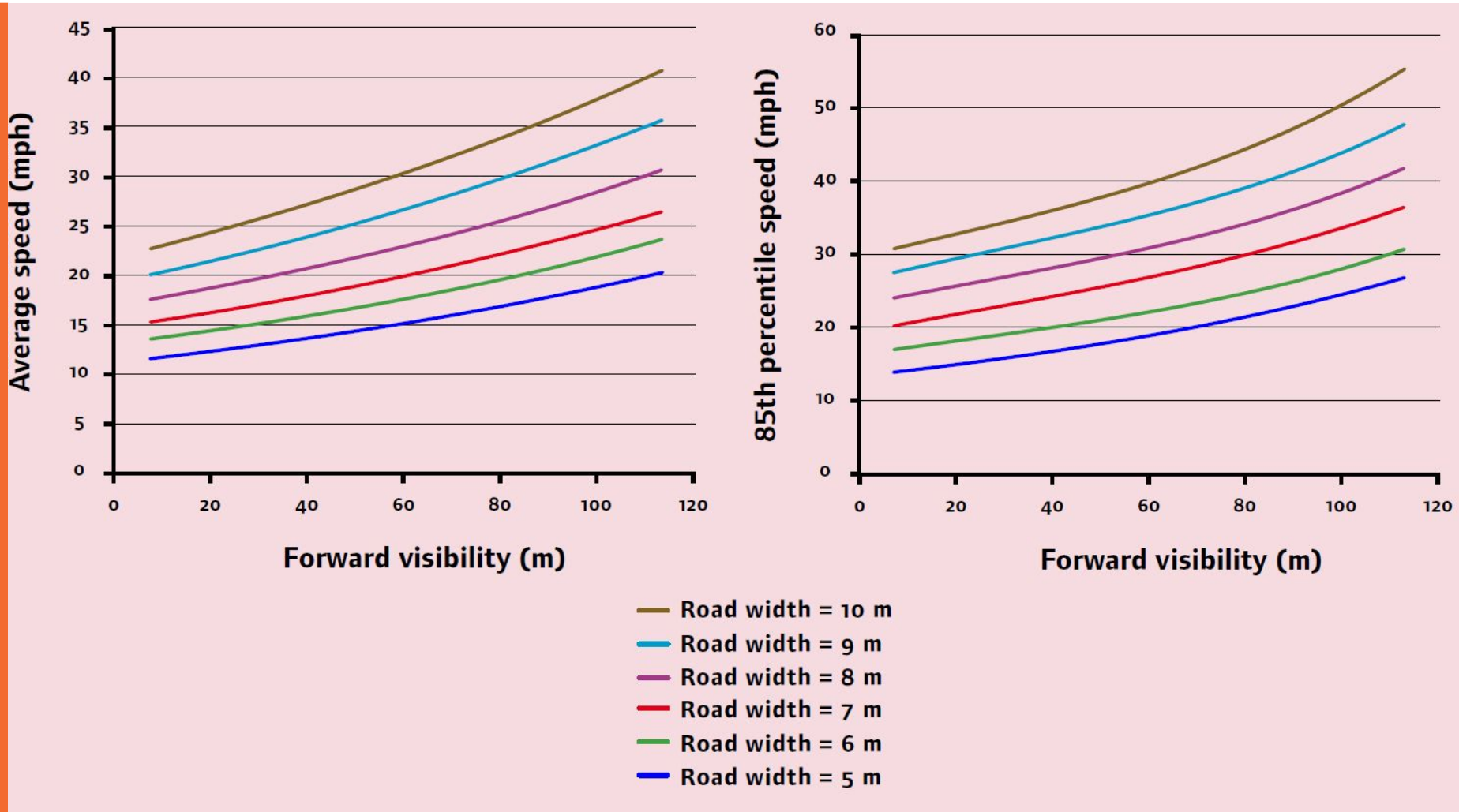
WIDTHS

MEASURES

PROJECTS



RECOMMENDED WIDTHS



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Manual for Streets : "Figure 7.16 Correlation between visibility and carriageway width and vehicle speeds (a) average speeds and (b) 85th percentile speeds. These graphs can be used to give an indication of the speed at which traffic will travel for a given carriageway width/forward visibility combination."

RECOMMENDED WIDTHS

Mixed Traffic Lanes

Current guidance is that lanes should either be under 3.2metres in width or over 4 metres, in order to discourage motorists from dangerous overtaking of cyclists. The 11ft and 12ft (3.3m and 3.7m) standard lane widths are now regarded as unsuitable for cyclists.

Width /metres	Commentary	Source
<3	Lanes wider than 3m are not necessary in most urban areas carrying mixed traffic. Lane widths of 3m or less will make it less likely that drivers will try to squeeze past cyclists.	MfS2
3.2-3.9 or 4.0m	“Lane widths between 3.2m and 3.9m are not acceptable for cycling in mixed traffic” LTN 01/20 Table 7.2 “lane widths between 3.2 m and 4m can be unsatisfactory where cyclists and motor traffic are expected to move together, as this range leaves insufficient room for drivers to pass cyclists safely. TSM C6 2.5.3	LTN 01/20 MfS2 Traffic Signs Manual Chapter 6
>3.8	Cars passing at 20mph	MfS2
>4		TSM C6
>4.3	Cars passing at 30mph	MfS2
>4.6	Bus/HGV passing at 20mph	MfS2
>5.05	Bus/HGV passing at 30mph	MfS2

The influence on drivers’ speed choice must be considered when settling on the width of lanes and carriageways.

The optical width of a lane or carriageway can be reduced using lines, different surfacing materials, including road paint, surface dressing, and hot rolled asphalt with coloured stone chippings.



Stone cubes reduce the optical width of these 3 metre lanes to around 2.2 metres. (Park Lane, Poynton)



Carriageway narrowed by cycle lanes with different colour surfacing

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RECOMMENDED WIDTHS

Cycle Lanes

Width /metres	Commentary	Source
>2m	Allows space for overtaking within the lane	LTN 01/20
>2m	busy street or 40mph +	MfS2, LCDS,
>1.5m	30mph or less	MfS2, LCDS,
<1.5	May encourage close passing	LTN 01/20
<1.2m	Not recommended	MfS2, LTN 02/08
>4m	Two way	LCDS



Where there are parked cars, a buffer distance of 0.5m is recommended

Footways

Width /metres	Commentary	Source
>2m	Minimum recommended	MfS

Islands and Refuges

Width /metres	Commentary	Source
1.2	to accommodate pedestrians only	MfS2
1.5	desirable width to accommodate wheelchair users	MfS2
2.0	minimum width to allow wheelchair users to pass one another. This is also the minimum width for cyclists (LTN2/08 para 10.2.7)	MfS2

Cycle Tracks

LTN 1/20 lists lane widths for different cycle flows, and recommended separation between cycle track and carriageway.

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RECOMMENDED WIDTHS

The diagram below is reproduced from Manual for Streets.

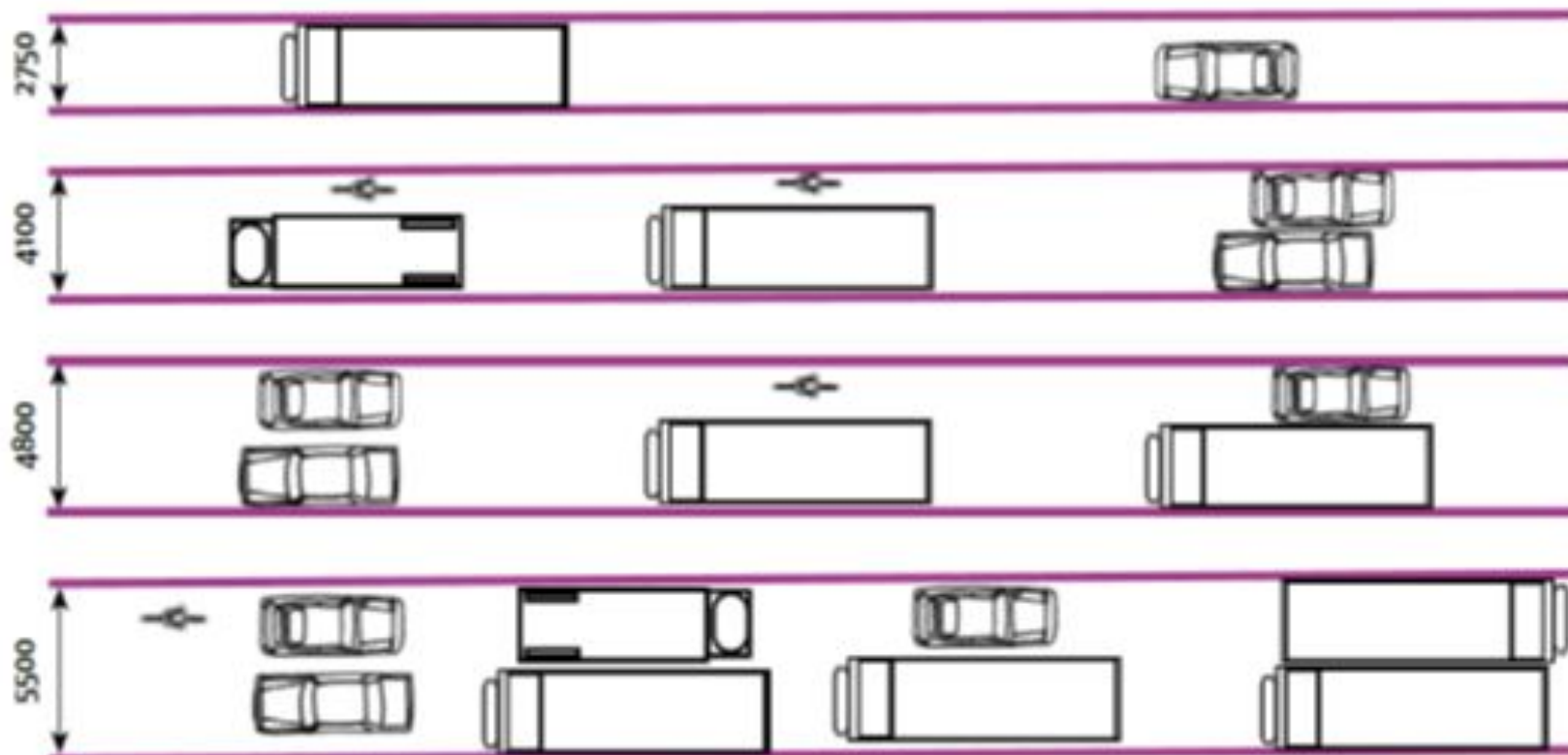


Figure 7.1 Illustrates what various carriageway widths can accommodate. They are not necessarily recommendations.

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ACTUAL STREET WIDTHS

Standard designs for standard widths

To help with streetspace reallocation, this Manual looks at the typical street widths found in the UK. Standard designs can be developed for standard street widths.

At least as far back as the 17th century, standard street widths were in use.

Between around 1750 and 1950, 30ft, 36ft and 40ft were the most common widths for highways.

The vast majority of streets have been created using feet as the measure, not metres.

Highway widths						
/feet	20	24	30	36	40	50
/metres	6.1	7.3	9.2	11.0	12.2	15.3
1670 Rebuilding of London Act		●				
1700s-1840s common use		•		●		●
1847 Town improvement Act	•		●			
1877 Model Byelaws			•	●		
1894 London Building Act					●	
Post 1877 local byelaws			•	●	●	•

Footways in the 1877 Model Byelaws were required to be 1/6th of the width of the highway. So 6ft footways and 24ft carriageways are commonplace.

The 24ft carriageway was considered suitable for two vehicles halted on either side, with room enough for a third to pass between.

The 1894 London Building Act set 40ft as the minimum width for highways, and this width was standard for new roads in created in London up until the end of the 1950s.

Post 1950s streets pick up a range of influences, including Radburn, Roads in Urban Areas, (1966), and Design Bulletin 32 Residential Roads and Footpaths, Layout Considerations (1977). In this period, residential highways and carriageways tend to be a little narrower. These layouts were deliberately designed to prevent through traffic; but introduced distributor roads, which are ill-suited to cycling and walking, leading to higher vehicle speeds.

These standards were withdrawn on the publication of Manual for Streets in 2007. However they continue to be in use by some local authorities, even though they are contrary to planning policy, against Department for Transport and best practice industry guidance, and in breach of the Public Sector Equality Duty.

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ACTUAL STREET WIDTHS

High Streets

The majority of main roads and high streets are based on historic town and village centres, and routes that connect towns and villages that are centuries old.

High Streets - Medieval and Roman : the majority

The majority of today's high streets are formed around medieval towns or villages and medieval or Roman roads. They comprise

- Traditional market streets which widen substantially in the centre
- Linear streets of a relatively constant width

Widths may vary from as little as 6 metres or less, through to 30 metres or more. While these older high streets are rarely of standard with, often a constant width carriageway has been introduced, with space taken away from the footway. On the narrower streets, this can create difficulties for pedestrians.

Victorian and Edwardian High Streets:

New shopping streets created in new suburbs created in this period tended to be given generous widths, based on standard dimensions

Feet	40	50	60	70	80	etc
Metres	12	15	18	21	24	

Shopping streets: 1950s and beyond

From the 1950s onwards, the pattern has been to build precincts and superstores, rather than traditional high streets with through traffic. This approach reflected in the 1950s new towns from the 19, and in Government guidance, such as Roads in Urban Areas (1966)

Main Streets

Urban areas develop out of towns and villages and along the main roads that serve them. These roads are generally ancient, going back to the medieval or iron age. Today their width is sometimes constrained by listed buildings, making widening impossible.

In the 1900s standard lane widths were common place for road improvements, and new road construction, including 10ft, 11ft, 12ft Common main road carriageway widths from this period include

Feet	22	24	30
Metres	6.7	7.3	9.2
Lane width	3.35	3.65	4.6

Since the 1900s, width, weight, speed and volume of traffic has increased. Cars are typically a foot wider than 50 years ago.

Eg:	Morris Minor	1950s	1,524mm
	Ford Mondeo	2020s	1,852 mm

Today, the 22ft and 24ft width carriageways present problems for cyclists, leaving insufficient space when vehicles overtake. Current guidance advises that traffic lanes should either be wide enough to allow vehicles to overtake cyclists safely, or narrow enough to discourage overtaking altogether. Lanes of 3.2-3.9 metres should be avoided.

Fear prevents people from cycling. Surveys indicate that over one half of people think that their local roads are too dangerous for cycling.

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ACTUAL STREET WIDTHS

1960s TO 2000s

Roads in Urban Areas, Ministry of Transport 1966

Warning: The lane widths marked in red are now considered unsuitable for cycling owing to the risk of close-passing.

Recommended lane widths:

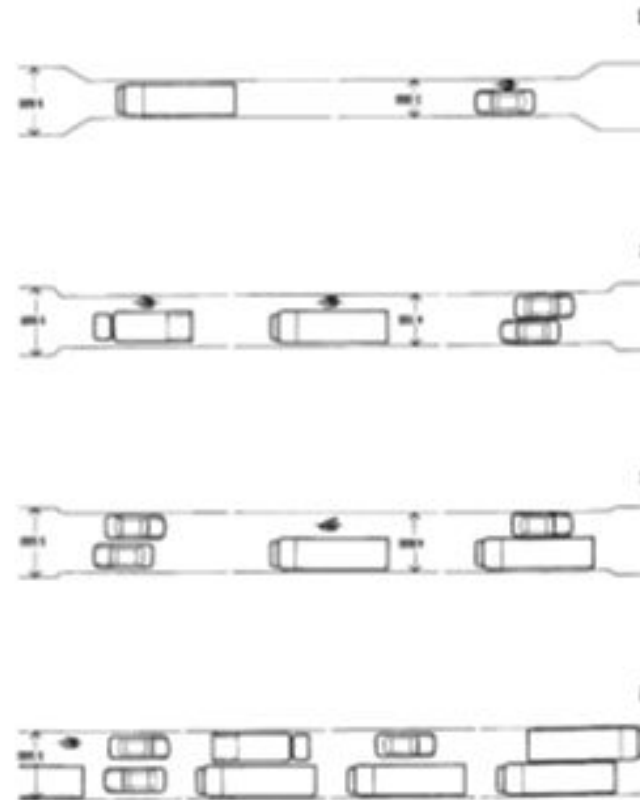
Primary distributor	12ft 3.66
District Distributor	12ft 3.66
Local Distributor	12ft 3.66 industrial
	11ft 3.35 principal business districts
	10ft 3.05 residential
Access	12ft 3.66 industrial
	11ft 3.35 principal business districts
	9ft 2.74 residential

“A nearside lane width of 14ft may be desirable on roads carrying large numbers of cyclists”

Carriageway

/metres	/feet	Lanes	Lane width
6.1	20	Two lane	3.1
6.7	22	Two lane	3.4
7.3	24	Two lane	3.7
9.2	30	Three lane	3.1
10.1	33	Three lane	3.4
11.0	36	Three lane	3.7
12.2	40	Four lane	3.1
13.4	44	Four lane	3.4
14.6	48	Four lane	3.7

Design Bulletin 32: Residential Roads and Footpaths, Layout Considerations (1977) (2nd Edition 1990)



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ROAD DANGER REDUCTION

- Speed
- Traffic calming
- Traffic Filters
- Low Traffic Neighbourhoods

ENABLING WALKING

- Walking speeds
- Footway improvement
- Decluttering
- Wider Crossings
- Walking Network

ENABLING CYCLING

- Tools and Reference
- Segregation: Lines
- Advice and Guidelines

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ROAD DANGER REDUCTION

Speed

Severity of injury and risk of death is directly related to impact speed.

Duty of care

Highway authorities owe a duty of care to all road users, whether careful or negligent. This includes children and people covered by the Equality Act 2010.

Children

Younger children are incapable of judging the speed of traffic travelling over 20 mph. Research suggests that it is not until the age of 13 that children can reliably cross streets where the speed of traffic is 25 mph. Elderly people and people with disabilities may have difficulties judging the speed of oncoming traffic, and may be slower to cross a street.

Influencing Speed

The evidence base for Manual for Streets - TRL 661 - found that driver's speed is influenced by factors including

- Reduced carriageway width (kerb to kerb) Eg reduction from 10 to 5 metres expected to reduce speed by 4mph.
- Reduced forward visibility
- Parking (speed reduction 2-5 mph) – effect on safety unclear

Manual for Streets recommends a design speed of 20mph.

Other sources of information

Action Vision Zero

20s Plenty

Traffic Calming

The Traffic calming regulations permit a rich range of traffic calming materials, that go far beyond standard highway. Use them to meet the requirements of the Statutory Guidance.

Traffic Calming Regulations 1999

Section 3 Works which are traffic calming works: build-outs, chicanes, gateways, islands, overrun areas, pinch-points, or rumble devices or any combination of such works are traffic calming works.

Section 7 Features which may be included in Traffic Calming Works:

lighting, paving, grass or other covering, pillars, bollards, planters, walls, rails or fences, objects or structures spanning the highway, or trees, shrubs or other plants.; for the purposes of making the traffic calming work conspicuous, enhancing the effect of the traffic calming work, promoting the safety of persons using the highway, or preserving or improving the environment through which the highway passes.

The Quiet Lanes and Home Zones (England) Regulations 2006

Traffic Calming - Local Transport Note 02/07

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ROAD DANGER REDUCTION

From the Statutory Guidance

“Modal filters (also known as filtered permeability); closing roads to motor traffic, for example by using planters or large barriers. Often used in residential areas, this can create neighbourhoods that are low-traffic or traffic free, creating a more pleasant environment that encourages people to walk and cycle, and improving safety.”

Point vs Area Filters

Filters can be created as Point Filters, or Area filters where the filter is carried over a short length of street, which can then be used for other purposes such as cycle parking, parklets or mini play areas.

Classes of Filters

- Pedestrian and Cyclist Only filters
- HGV width filters
- One way filters
- Bus Gates
- Timed filters (eg restrictions during school hours)
- One way loops
- Speed limits/Traffic Calming that favour some routes over others

Filters can be

- Physical eg Posts, Planters Gates
- Regulatory
 - Restrictions on types of traffic
 - One way restrictions
- Technological
 - Automatic Number Plate Recognition
 - Rising Bollards (for bus gates)

Measures not Requiring Traffic Orders

- General measures to encourage shift from driving to walking and cycling
- Revocation of a 40 mph limit on a lit road

Measures Requiring Traffic Orders

- Changes in speed limits - Part VI Road Traffic Act 1984

Restrictions / Bans Requiring Traffic Orders

- Temporary Traffic Regulation Orders
- Experimental Traffic Regulation Orders

These orders can be put in place with the minimum of bureaucracy and without delay.

Further information [see the page on Traffic Orders](#)

Relevant legislation

[The Road Traffic \(Temporary Restrictions\) Procedure Regulations 1992](#)

[The Local Authorities' Traffic Orders \(Procedure\) \(England and Wales\) Regulations 1996](#)

[The Secretary of State's Traffic Order \(Procedure\) \(England and Wales\) Regulations 1990](#)

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ROAD DANGER REDUCTION

LOW TRAFFIC NEIGHBOURHOODS

Low traffic neighbourhoods are the best option for discharging the statutory duties in residential areas. They are being implemented by most progressive councils.

Recommendations based on the London Living Streets Guidance:

- Size: around one square kilometre - 15 minutes walk across
- Cluster the neighbourhoods around a centre that has shops, public transport
- Link the cells with safe, quiet walking and cycling routes
- Restrict through/rat-running traffic using modal filters
- Within the neighbourhood create
 - School streets
 - Play streets
 - Parklets



100 years of change in a street created in the 1900s shows how cars have replaced people

Further Reading

Low emission neighbourhoods

Transport for London

Low traffic neighbourhoods - A Guide for Policy Makers

London Living Streets

Low Traffic Neighbourhoods - Practical Guide

London Living Streets

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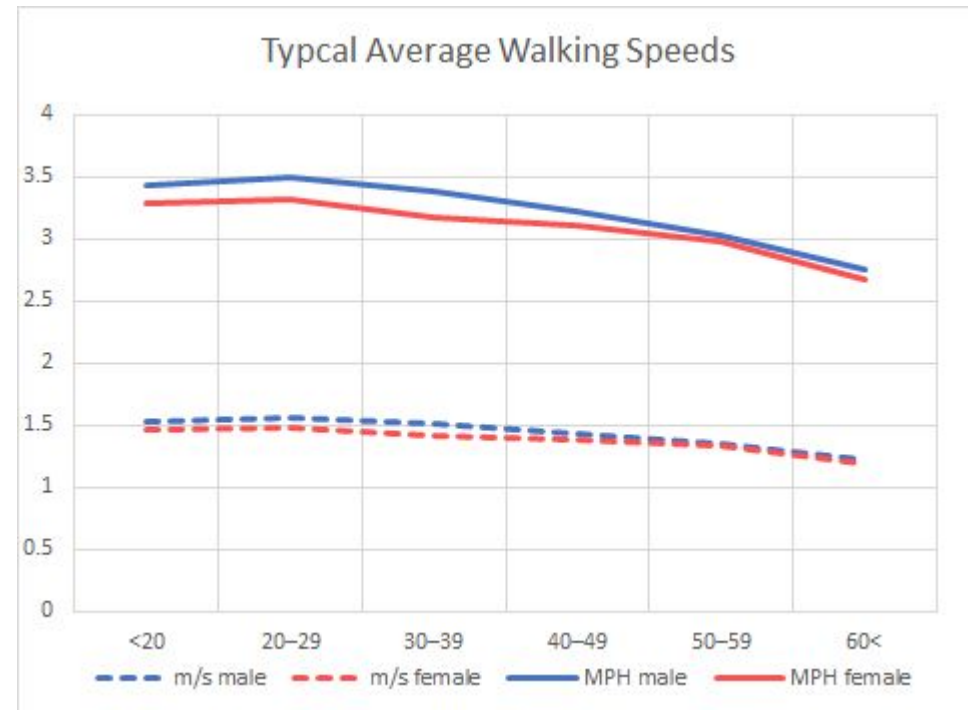
ENABLING WALKING

Walking speeds

The normal walking speed of a healthy adult is sometimes quoted as being between 3-4 miles per hour, but the reality is different. There is a range of speeds that reflect age, health, and sight.

‘Normal’ walking speeds for community-dwelling older adults who are healthy generally range from 0.90 to 1.30 m/s.

Age	Speed m/s	MPH
3-6	0.6	1.3
Older Children	1.5 average Range 1.1-1.8	3.4
Adults (healthy)	1.2-1.55 Typical averages 0.9 - 1.8 Typical Range	2.7-3.5 2-4
Adults (infirm)	0.7 down to 0.35	0.8-1.5
Blind people	Typical averages 0.4 - 0.6	0.9-1.4



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ENABLING WALKING

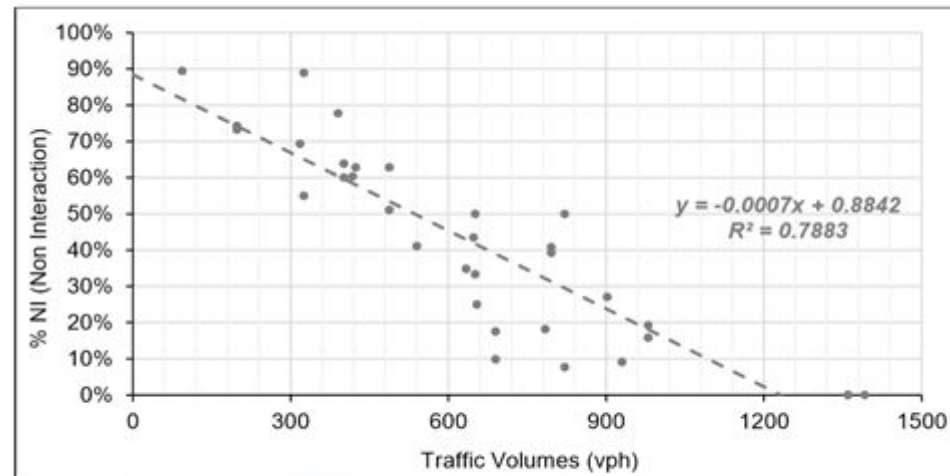
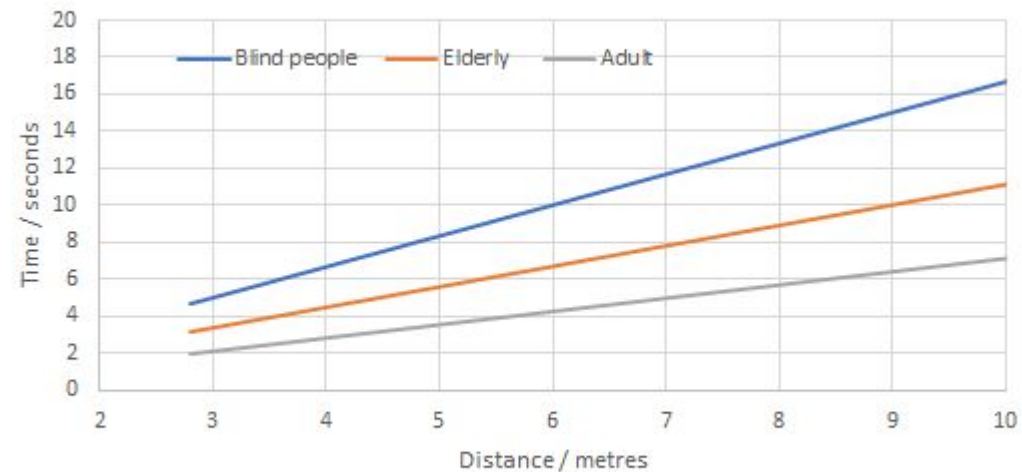
Walking speeds - implications for street improvement

The graph to the right illustrates the time pedestrians take to cover typical distances involved in crossing streets at typical speeds.

	MPH	metres per second
Blind people	1.3	0.6
Elderly People	2.0	0.9
Adults	3.1	1.4

As traffic flows increase, pedestrians have an ever reducing chance of finding a gap in the traffic to enable them to cross.

Pedestrian Crossing Time



Analysing Pedestrian and Vehicle Interaction at Courtesy Crossings Guardo & Jones

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ENABLING WALKING

From the Statutory guidance

“Using cones and barriers: to widen footways along lengths of road, particularly outside shops and transport hubs; to provide more space at bus stops to allow people to queue and socially distance; to widen pedestrian refuges and crossings (both formal and informal) to enable people to cross roads safely and at a distance.”

Legal

People have the primary right to pass and repass along and across the highway.

Traffic authorities are under a duty to secure the expeditious movement of traffic, including pedestrians, and to remove barriers to movement. (Traffic Management Act 2004)

Highway authorities are required to protect the rights of pedestrians to cross streets.

The Public Sector Equality duty applies to the actions of the local authorities and their contractors. (Equality Act 2010)

Measures

- Cones
- Barriers
- Kerb buffer zone
- Part use of carriageway
- Footway extended at same height into carriageway

It is important to avoid introducing barriers that obstruct pedestrians from crossing the street.

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ENABLING WALKING

Clutter

Footways should be cleared to provide an unobstructed path for pedestrians.

- Reduce the number of signs
- Mount several signs on the same pole
- Mount on walls or buildings
- Remove or relocate other objects that are in the way.

Obstructions include: traffic signs, guardrails, disused cabinets, phone boxes etc, Advertising A boards, litter bins.

Traffic Signs

Warning signs

Unnecessary warning signs make no contribution to safety, and merely add to clutter and costs. They can be removed.

In law drivers are under a duty to take the road as they find it. They are required under the **Highway Code** to drive with due care and attention, and show consideration for other road users. They have no right to be warned of natural road hazards.

Regulatory signs

Regulatory signs are only required if there is a traffic regulation order that needs to be brought into effect. Careful street design can create an environment that requires neither orders nor signs.

Guidance

Local Transport Note 01/08 Traffic Management and Streetscape

Guardrails

Highway authorities have a power to introduce guardrails, but not a duty. Reasons given for installation have included:

- Preventing pedestrians from entering the carriageway, for example, to direct them to a controlled crossing point.
- Preventing drivers from parking their cars.

Research carried out for the Department for Transport in preparation of **Local Transport Note 03/08** could find no evidence of a safety benefit for guardrails. Conversely a highway authority, by removing the informed choice from the pedestrian as to where they cross, will have a duty of care for the safety of the pedestrian at the crossing point, and also for the general safety of highway users.

Guardrails may increase traffic speeds, may contribute to cyclists being crushed by lorries, and may discourage walking.

Guardrails are not designed to and are not able to stop an out of control vehicle from veering onto the footway: this is where a fully specified vehicle restraint system would be needed.



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ENABLING WALKING

PRECEDENT: BATHURST MEWS, LONDON



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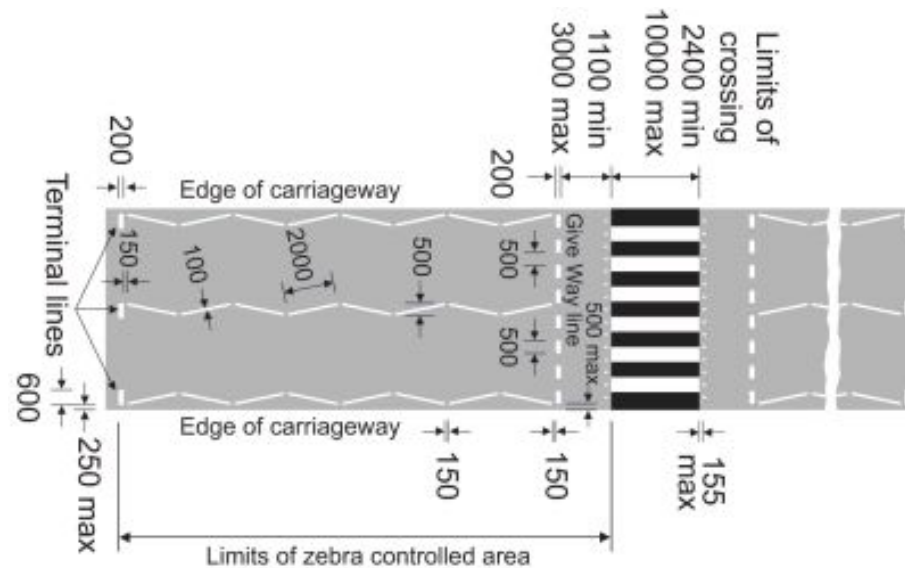
ENABLING WALKING

Zebra Crossings

up to 10 metres width along kerb

Under the Traffic Signs Regulations and General Directions, signal controlled crossings and zebra crossings may be up to 10 metres

Diagram 1001.4 - Traffic Signs Regulations and General Directions:

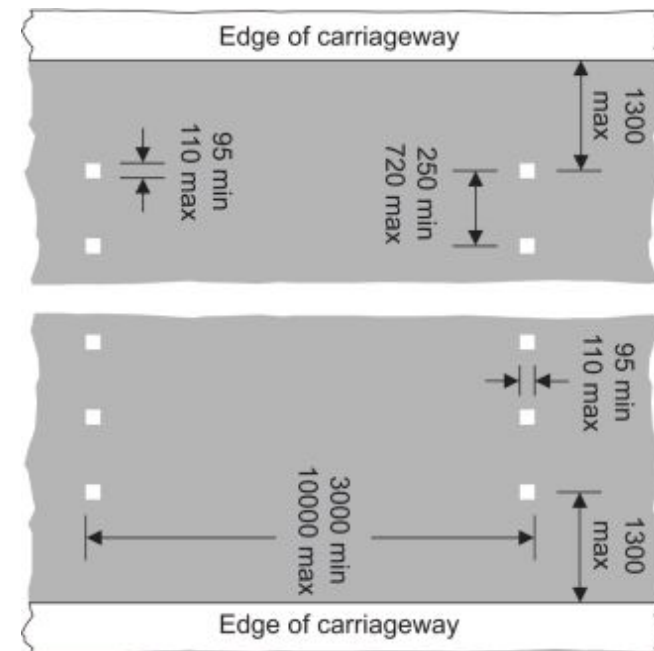


Requires relocation of beacons, with adjustment to cabling.
Costs: £2000 per zebra

Signal Controlled Crossings

up to 10 metres width along kerb

Diagram 1055.1 Traffic Signs Regulations and General Directions demonstrating max 10 metre width along kerb



Cost dependent on requirement to move signal heads

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ENABLING WALKING

WIDER CROSSINGS



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Paired puffin crossing outside St Paul's Cathedral created around 2010 - approx 30 metres wide

ENABLING WALKING

WALKING NETWORK

Walking Network

Local authorities and volunteer organisations can create walking networks on quieter roads and footpaths.

Case Study: The Central London Walking Network

The Central London Walking Network proposes a network of healthy and attractive routes that connects London's iconic destinations, railway stations and parks.

It uses London's ancient, characterful streets for those on foot, leaving the big roads built by the Victorians and Edwardians for through motor traffic. These older streets would need relatively small improvements to create safe, clean, quiet, pleasant and interesting walking environments.

Ingredients of the network

The network uses a variety of features to create a calm, pleasant and safer walking environment including:

- measures to reduce traffic volumes such as Low traffic Neighbourhoods
- reduced on-street parking;
- seating so people can stop and rest;
- public art to enrich the environment and community;
- opportunities for seating outside restaurants, pubs and cafes;
- improved and more frequent crossing facilities.



Further information: [London Living Streets](#)

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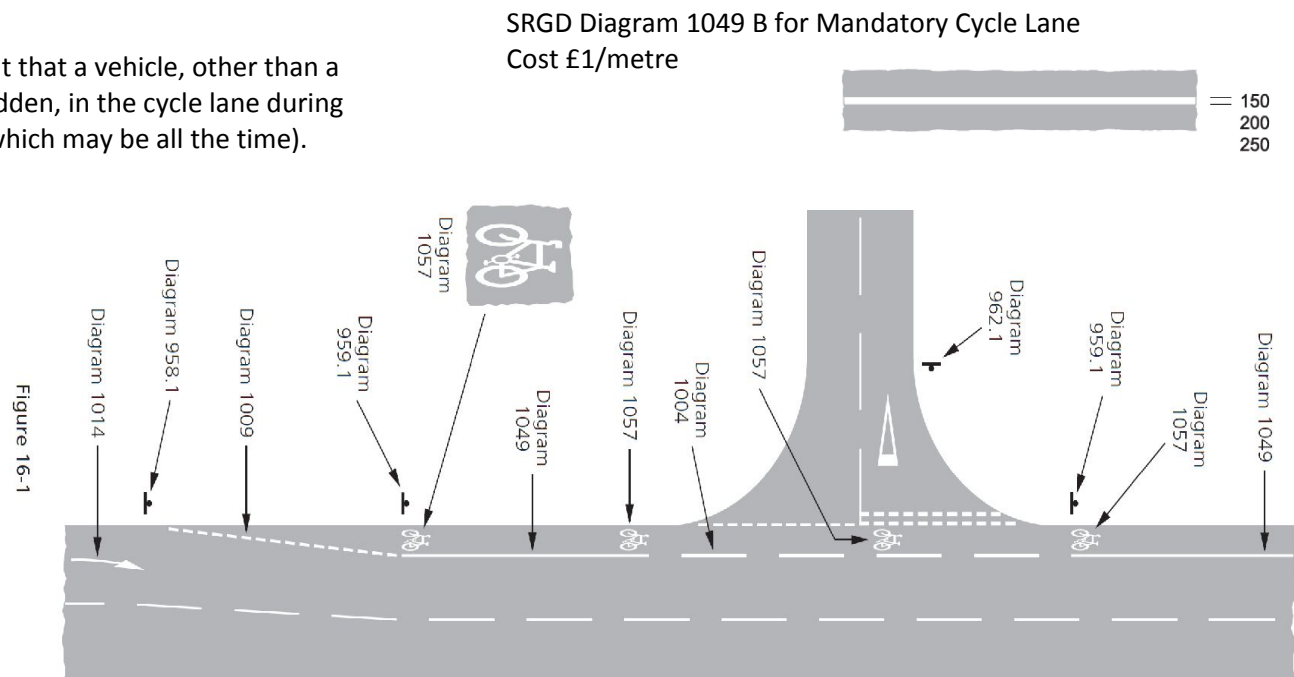
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ENABLING CYCLING

Mandatory Cycle Lanes

The marking conveys the requirement that a vehicle, other than a pedal cycle, must not be driven, or ridden, in the cycle lane during the cycle lane's hours of operation (which may be all the time).

Figure 16.1
Traffic Signs Manual
Chapter 4



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Advisory Cycle Lanes

Figure 16.3
Traffic Signs Manual
Chapter 4
No order needed

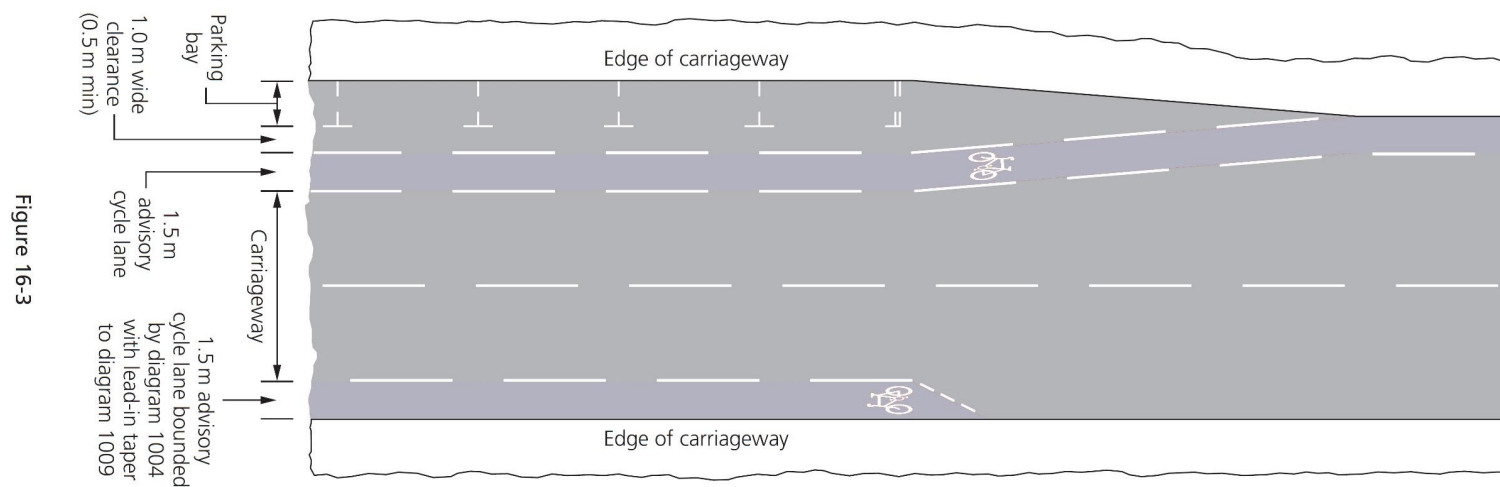


Figure 16-3

ENABLING CYCLING

Main Advice

Department for Transport

~~Cycle infrastructure design (LTN 2/08)~~ Withdrawn

Cycle infrastructure design (LTN 1/20)

Manual for Streets

TRL 661 Manual for Streets Evidence Base

Manual for Streets 2

Highways England - Design Manual for Roads and Bridges

NB these standards are for trunk roads and expressly not intended for streets in cities, towns and villages. In some instances their use will be unlawful where there has been no due regard to the Public Sector Equality Duty.

CD 109 - Highway link design

CD 143 - Designing for walking, cycling and horse-riding

~~CD 195 - Designing for cycle traffic~~ Withdrawn

London Cycle Design Standards

Chapter 1 - Design requirements

Chapter 2 - Tools and techniques

Chapter 3 - Cycle-friendly streets and spaces

Chapter 4 - Cycle lanes and tracks

Chapter 5 - Junctions and crossings

Chapter 6 - Signs and markings

Chapter 7 - Construction, including surfacing

Chapter 8 - Cycle parking

Manchester Beelines

Cycling and Walking Infrastructure Proposal

Statutory Guidance

- *Installing 'pop-up' cycle facilities*
- *converting traffic lanes into temporary cycle lanes (suspending parking bays where necessary);*
- *widening existing cycle lanes to enable cyclists to maintain distancing.*
- *light segregation features such as flexible plastic wands;*
- *Facilities should be segregated as far as possible*

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ENABLING CYCLING

Useful Tools

Propensity to Cycle Tool

Detailed tool which includes 2011 census data.

Cycling Infrastructure Prioritisation Toolkit (CyIPT)

A DfT-funded research project at the University of Leeds

Rapid cycleway prioritisation tool

An algorithm which suggests which streets would be most popular for cyclists based on census data.

Widen My Path

Allows people to indicate problems for cyclists on the highway, and to suggest improvements

Useful References

Walking and Cycling - the economic benefits

Transport for London

Gear Change - Department for Transport policy document

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CROSSING THE STREET

- Roundabouts & Courtesy Crossings

MAIN STREET

- 7.3m (24ft) Carriageway
- Temporary Transitional Position
- 9.2m (30ft) Carriageway

JUNCTIONS

- Temporary Side Road Treatment
- Temporary Mixing Zone
- Temporary Active Priority Junction

SHOPPING STREETS

- 9m 30ft Highway
- 11m (36ft) Highway
- 12.2 (40ft) Highway
- 14m Highway
- 19m Highway

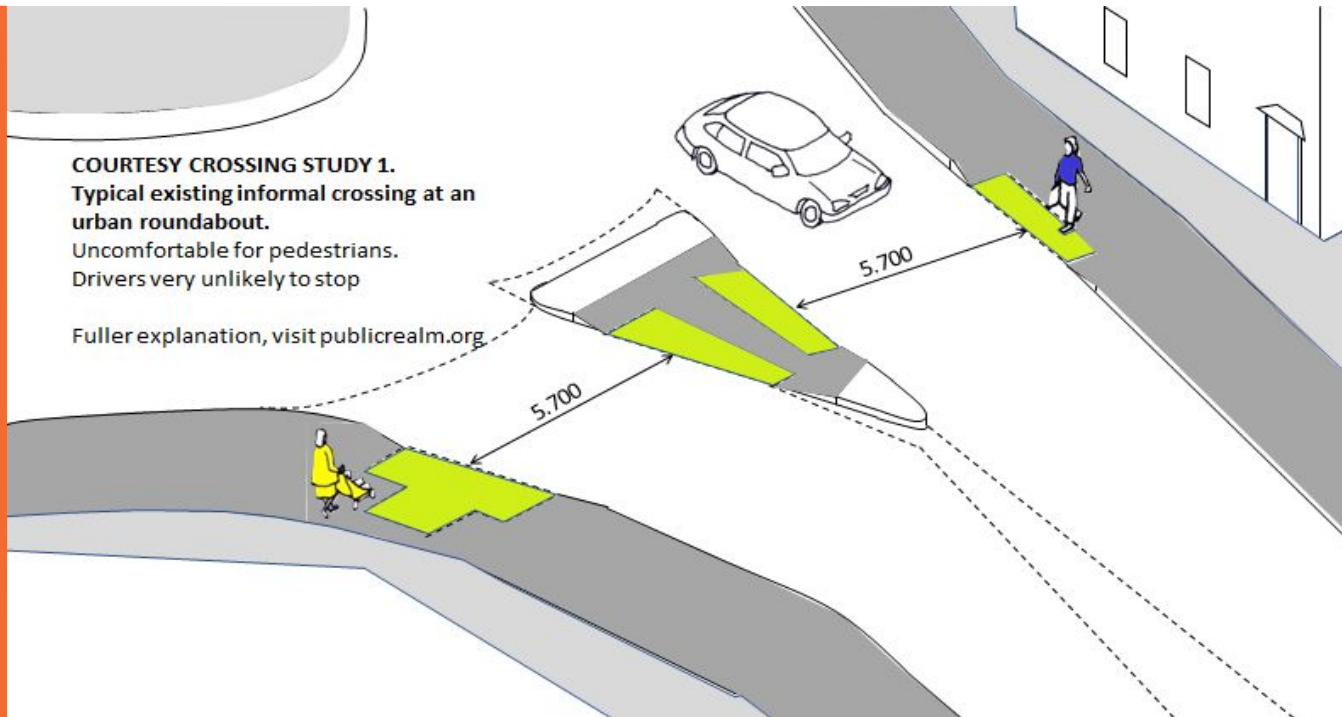
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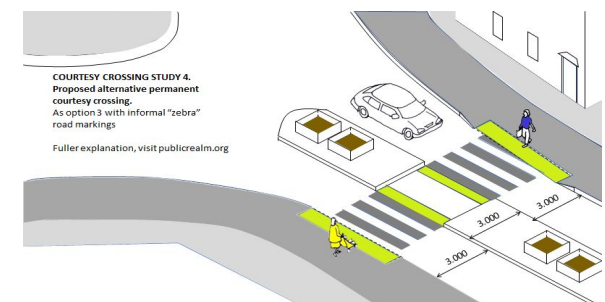
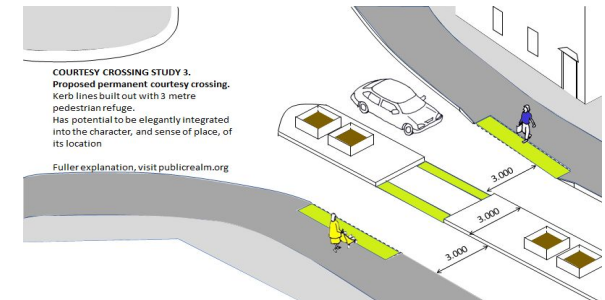
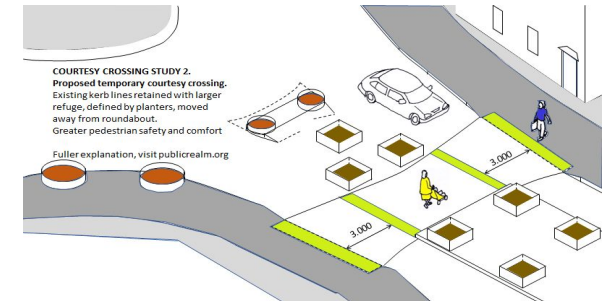
PROJECTS

CROSSING THE STREET



Roundabouts can present considerable difficulties for pedestrians. In this typical example there is a 5.7 metre distance between the kerb and the central island. To walk this distance will take a typical adult less than 5 seconds, a 6 year old child nearer 7 seconds, a blind person may take 10 seconds or more, and someone who is frail around 15 seconds. During that time, an oncoming car travelling at 30 mph will have covered nearly 200 metres, making the challenge of judging when it is safe to cross very difficult.

The following examples show how improvements can be made at low cost.



CROSSING THE STREET

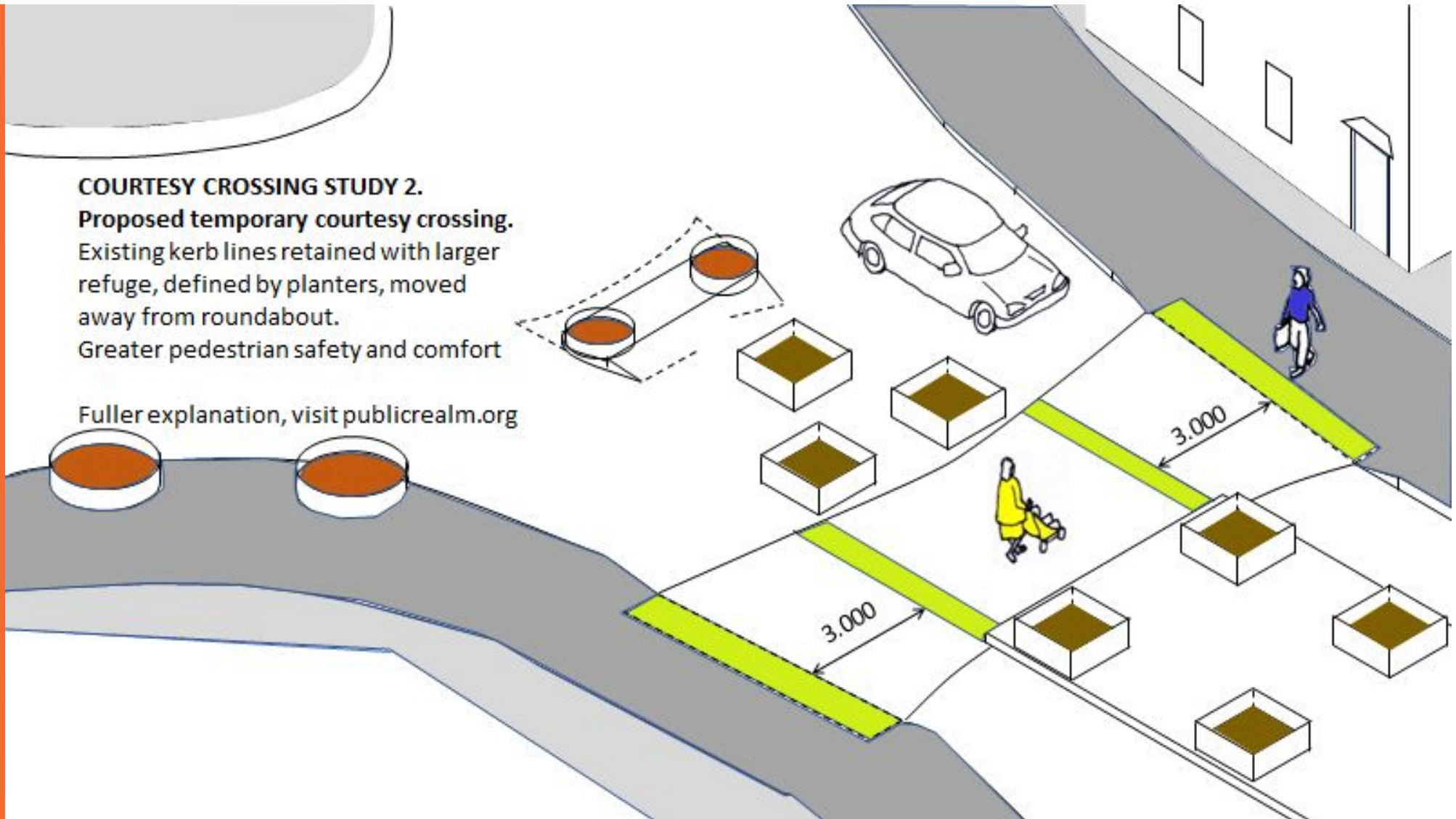
COURTESY CROSSING STUDY 2.

Proposed temporary courtesy crossing.

Existing kerb lines retained with larger refuge, defined by planters, moved away from roundabout.

Greater pedestrian safety and comfort

Fuller explanation, visit publicrealm.org



CROSSING THE STREET

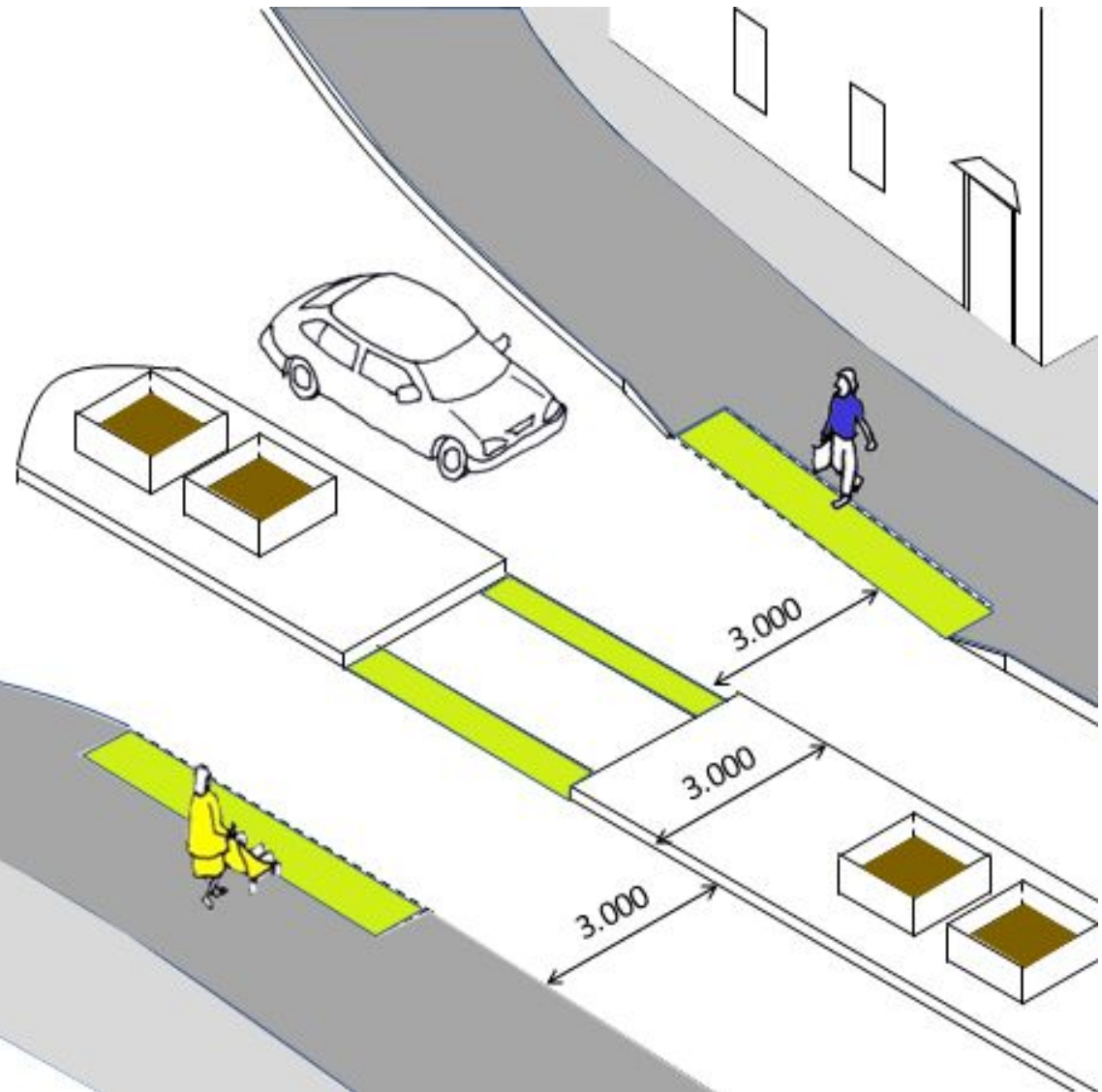
COURTESY CROSSING STUDY 3.

Proposed permanent courtesy crossing.

Kerb lines built out with 3 metre pedestrian refuge.

Has potential to be elegantly integrated into the character, and sense of place, of its location

Fuller explanation, visit publicrealm.org

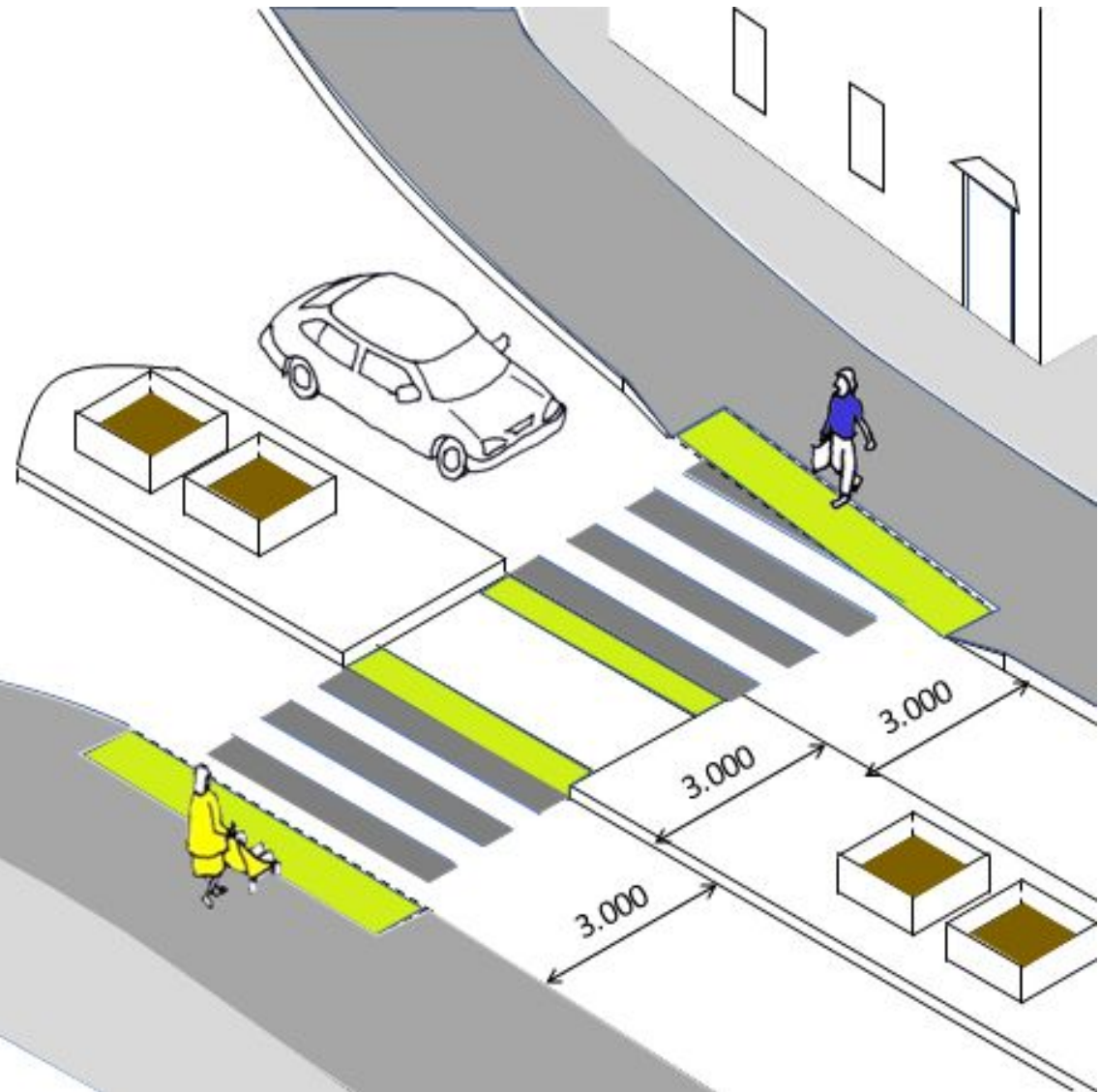


CROSSING THE STREET

COURTESY CROSSING STUDY 4. Proposed alternative permanent courtesy crossing.

As option 3 with informal “zebra”
road markings

Fuller explanation, visit publicrealm.org



MAIN STREET

24ft / 7.3 metre wide carriageways are found extensively across the Great Britain owing to this being a standard measurement from the 18th century to the present day.

These main streets are often the core of the movement system within towns and cities.

The carriage width produces two 3.66 metre lanes, which are regarded as unsuitable for cycling under current guidance.

Local Transport Note 01/20

"Lane widths between 3.2m and 3.9m are not acceptable for cycling in mixed traffic" LTN 01/20 Table 7.2

Traffic Signs Manual Chapter 6 (20190

"lane widths between 3.2 m and 4m can be unsatisfactory where cyclists and motor traffic are expected to move together, as this range leaves insufficient room for drivers to pass cyclists safely."

The challenge is to devise an arrangement which allows pedestrians to cross, and cyclists and drivers to safely share the space.



This suburban street could provide an important and direct route for cyclists, but fear of traffic will prevent most potential cyclists from using it. The lanes are 3.66 metres wide, which is against current advice for safe cycling. It is difficult for pedestrians to cross.



This street is the setting for a secondary school. It is risky for children to cross, and difficult for cyclists.

LAW

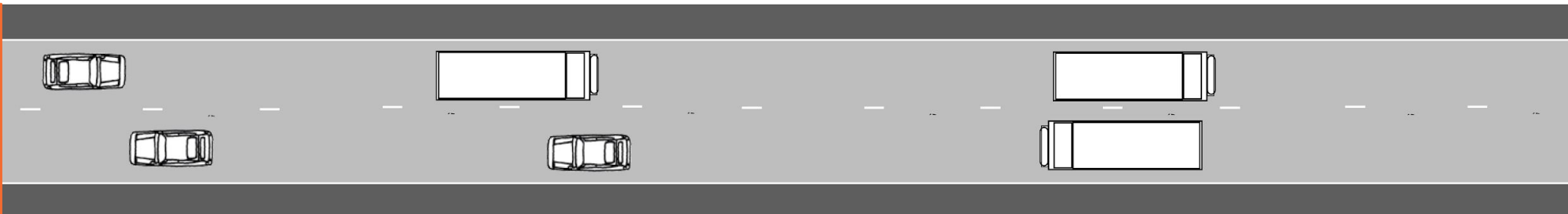
WIDTHS

MEASURES

PROJECTS

MAIN STREET

7.3m (24ft) CARRIAGEWAY 2



36 ft street with 24ft / 7.3 metre wide carriageways and 6ft footways with 12ft/3.66 metre lanes:- unsuitable for cyclists
In all the examples below, pedestrian crossings would be required, though they are not illustrated..
20mph speed limits are required on these streets, to protect all road users. Average speed cameras can be used to ensure adherence.



Asymmetric overtaking lanes: dividing of the carriageway into one 3 metre and one 4.66 metre lane for overtaking. The lanes would switch every 100 metres or so, to enable both streams of traffic overtaking opportunities A variation on this system



1.5 metre coloured cycle lanes + 4.3 metre vehicle lane - this arrangement enables opposing cars to pass within the confines of the centre lane, larger vehicles will need to use part of the cycle lane.

MAIN STREET

7.3m (24ft) CARRIAGEWAY 3



Removing the centre line

Drivers tend to follow lines. In this illustration, both centre lines and cycle lane markings have been removed. Drivers are tending to drive closer to the kerb, rather than the oncoming traffic. The retention of a centre line may have countered this.

Research questions include:

- Is a continuous but 'narrower' cycle lane preferable to a wider but discontinuous and a much shorter length of cycle lane?
- Under what circumstances is it sensible to remove the centre line?

LAW

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MAIN STREET

7.3m (24ft) CARRIAGEWAY 4



Optimised for cyclists - an example from Holland



Constant width cycle lanes, in a reprofied street - Holland



Hatched markings in the centre of this high speed road - an environment optimised for vehicles

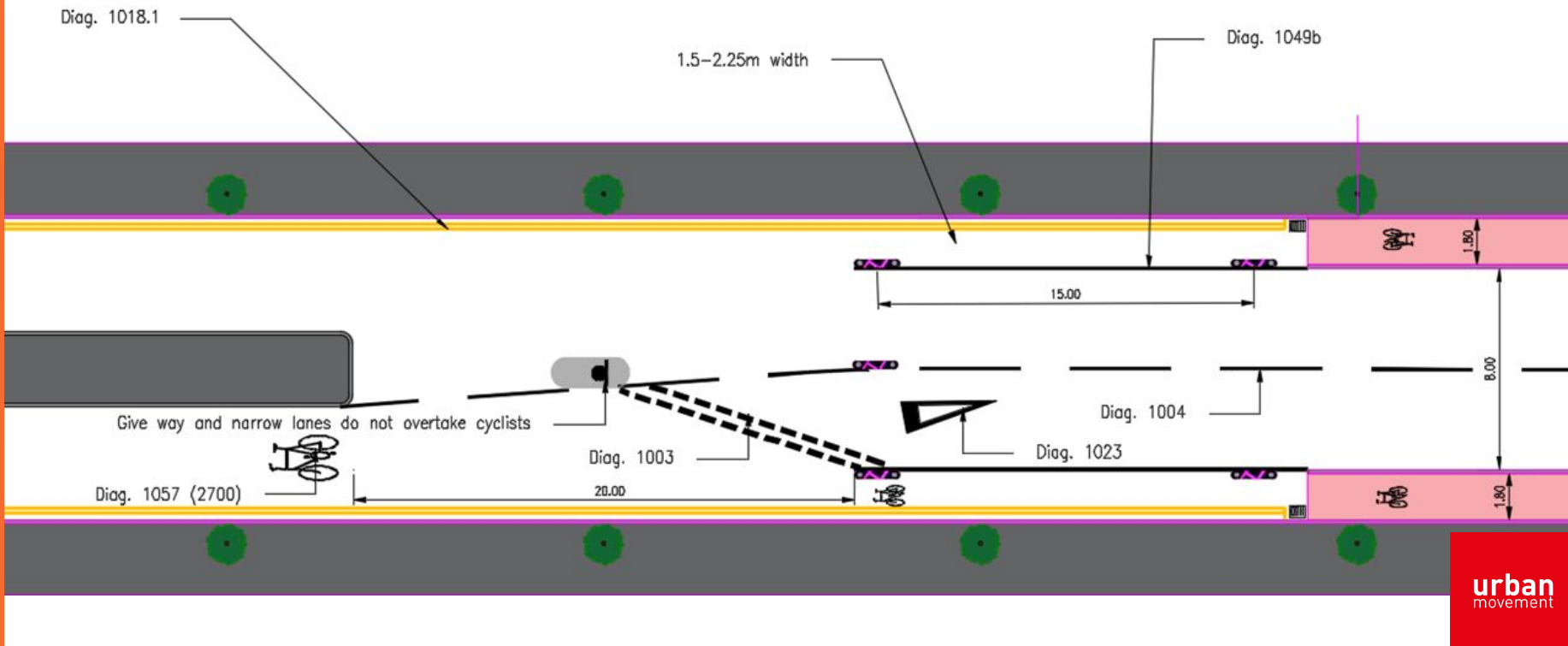
MAIN STREET

Temporary Transitional Position

In some instances cyclists may need to transition from pop up cycle lanes into a lane shared with motor vehicles.

This design lets drivers know that they are effectively entering a junction where they will merge with another stream of traffic. It should help enable cyclists to move across into a primary position whilst clearly informing cyclists that this is the case.

A “Narrow lanes – do not overtake cyclists” temporary sign may be used on the approach. These signs are in use in London. Because these signs do not appear in the Traffic Signs Regulations General Directions, they are advisory only and cannot be enforced.



LAW

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MAIN STREET

9.2m (30ft) CARRIAGEWAY 1

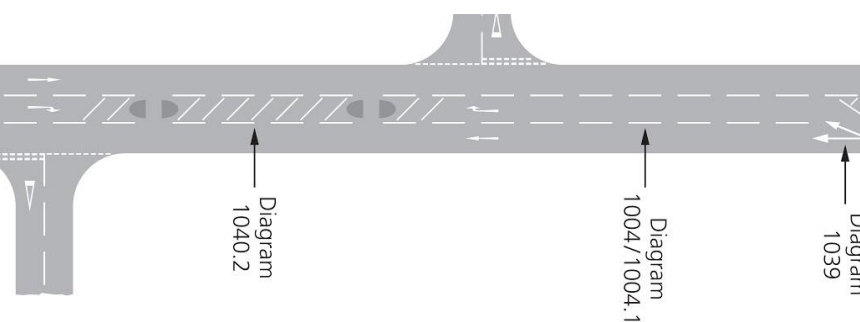
From around 1900 through to the 1930s, many arterial roads were built or existing roads widened to provide three 10ft lanes. The central lane was provided for overtaking: the so called “lane of death”.

In the 1980s there was a move to improve safety on these roads. The standard method was to remove the centre lanes using hatching to create “ghost islands”, and pedestrian refuges were introduced.

The traffic islands create pinch points which are very unnerving for cyclists being followed by faster traffic, especially lorries.



Further research **TRL 621 The Effect of Road Narrowing on Cyclists**



LAW

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In this highway, the cycle lane progressively narrows and then disappears at the pinch point created by the pedestrian refuge.



MAIN STREET

9.2m (30ft) CARRIAGEWAY 2

Emergency scheme - Quick, Light, Cheap

- Reduce the speed limit from 40 to 30, mph or from 30 to 20 mph to enable 1.5 metre width cycle lanes and to discharge Common Law Duty of Care.
- Retain right turn lanes at junctions.
- Burn out centre hatching elsewhere - approx. cost £2/metre of line
- Introduce lines to mark cycle lanes, TSRGD 1049
- Introduce a centre line on 30mph roads, Taper up to island for 30mph limit: 1 in 40
- Consider omitting centre line on 20mph roads to help reinforce lower speed limit, apart from tapers at pedestrian refuges.

Result

- 1.6 metre mandatory cycle lanes in both directions
- 6.0 metre two way carriageway
- Estimated cost £9 per linear metre, not including traffic management. (£15,000 per mile)

Upgrade: Segregated Cycle Lanes

- Delineate the cycle lanes with wands, bolt down posts or Orcas
- Estimated costs £50,000 per mile
- Introduce planters at pedestrian islands

LAW

WIDTHS

MEASURES

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Before



Stage 1 Improvement – Cycle lanes, safer speeds



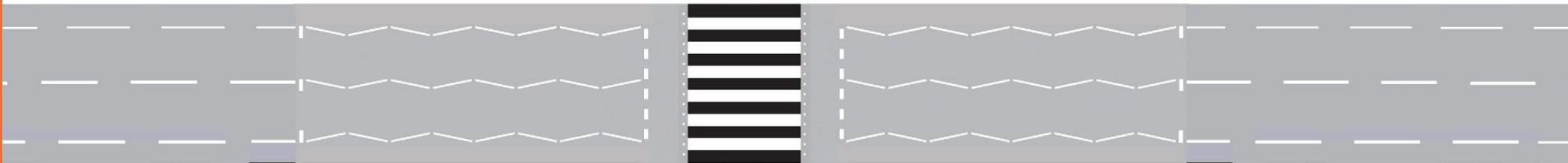
MAIN STREET

9.2m (30ft) CARRIAGEWAY 3

Stage 1 Enhancement: Cycle lanes + give way lines to traffic at pinch points



Stage 1+ Zebra crossing to replace pedestrian refuge



Stage 1+ Coloured cycle lanes



MAIN STREET

9.2m (30ft) CARRIAGEWAY 4

The Traffic Signs Manual Chapter 4 offers three different options for alternative road markings, which should cost less than £10 per linear metre.

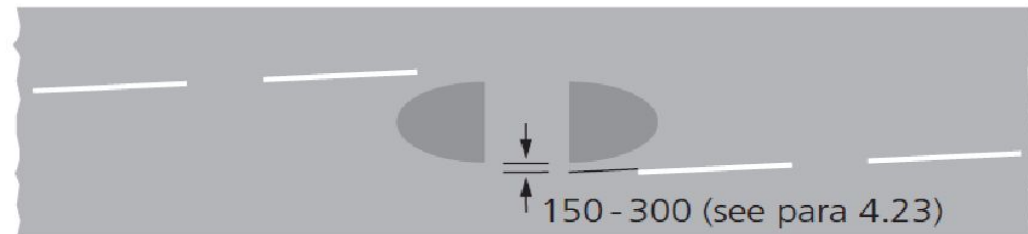
LAW

WIDTHS

MEASURES

PROJECTS

Diagram 1004
(may be replaced over the
taper length by diagram 1040
if greater emphasis is required)



For angle of taper see table 14-1

For angle of taper see table 14-1

Figure 5-5

MAIN STREET

9.2m (30ft) CARRIAGEWAY 5

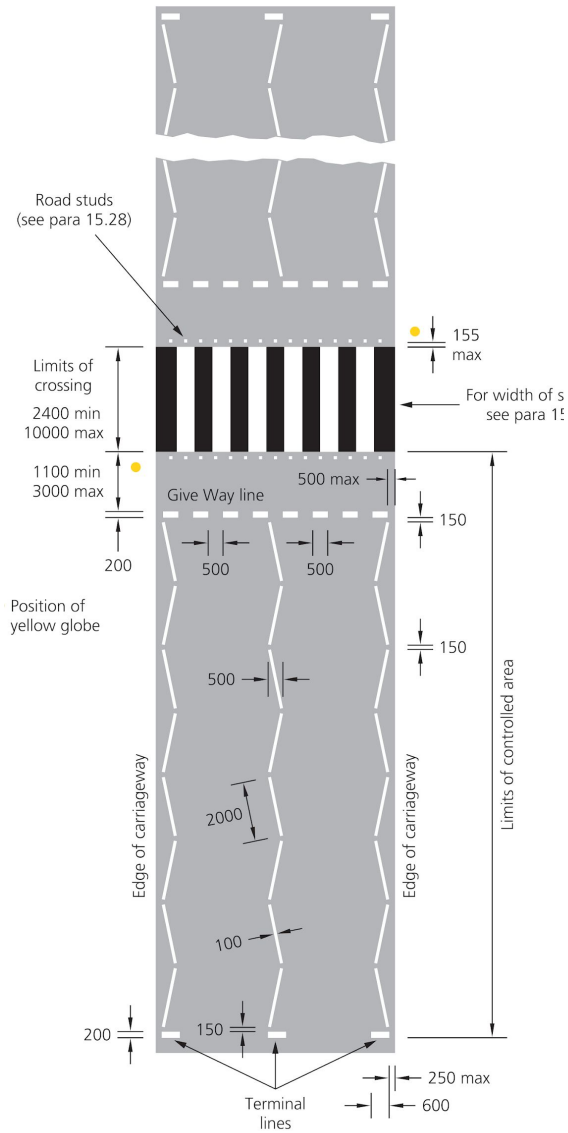
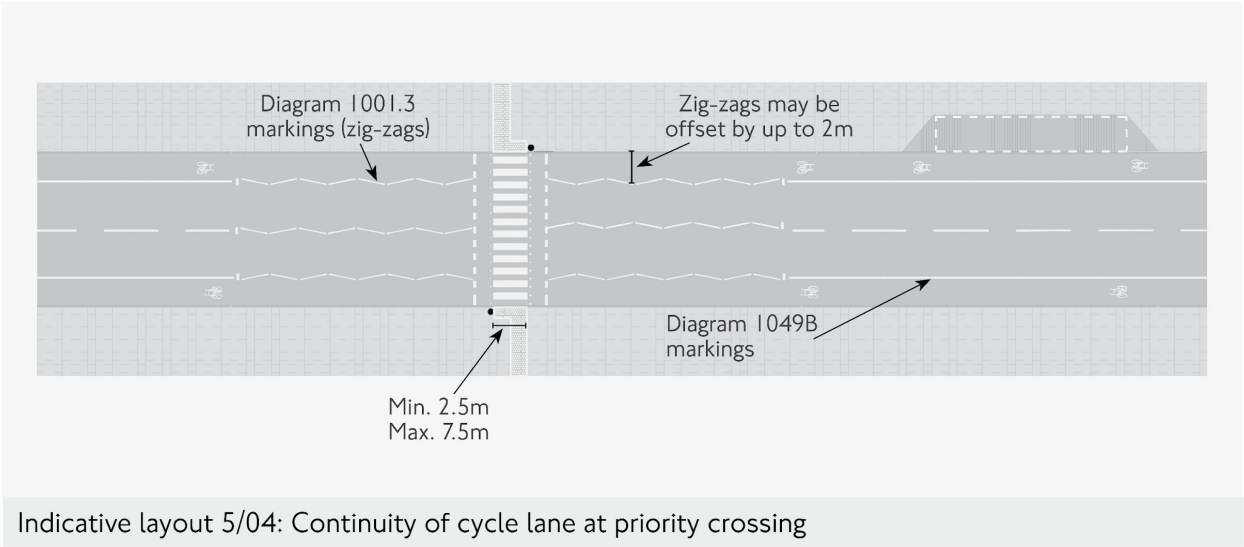



Figure 15-1



			<i>in Part 8</i>	<i>Directions</i>
7	Diagram 1049B Boundary of a mandatory cycle lane or division of a route into that part reserved for pedal cycles and that part reserved for pedestrians conveying the requirements at paragraph 12 of Part 7 (Longitudinal marking)	 = 150 200 250	1, 9	1

LAW

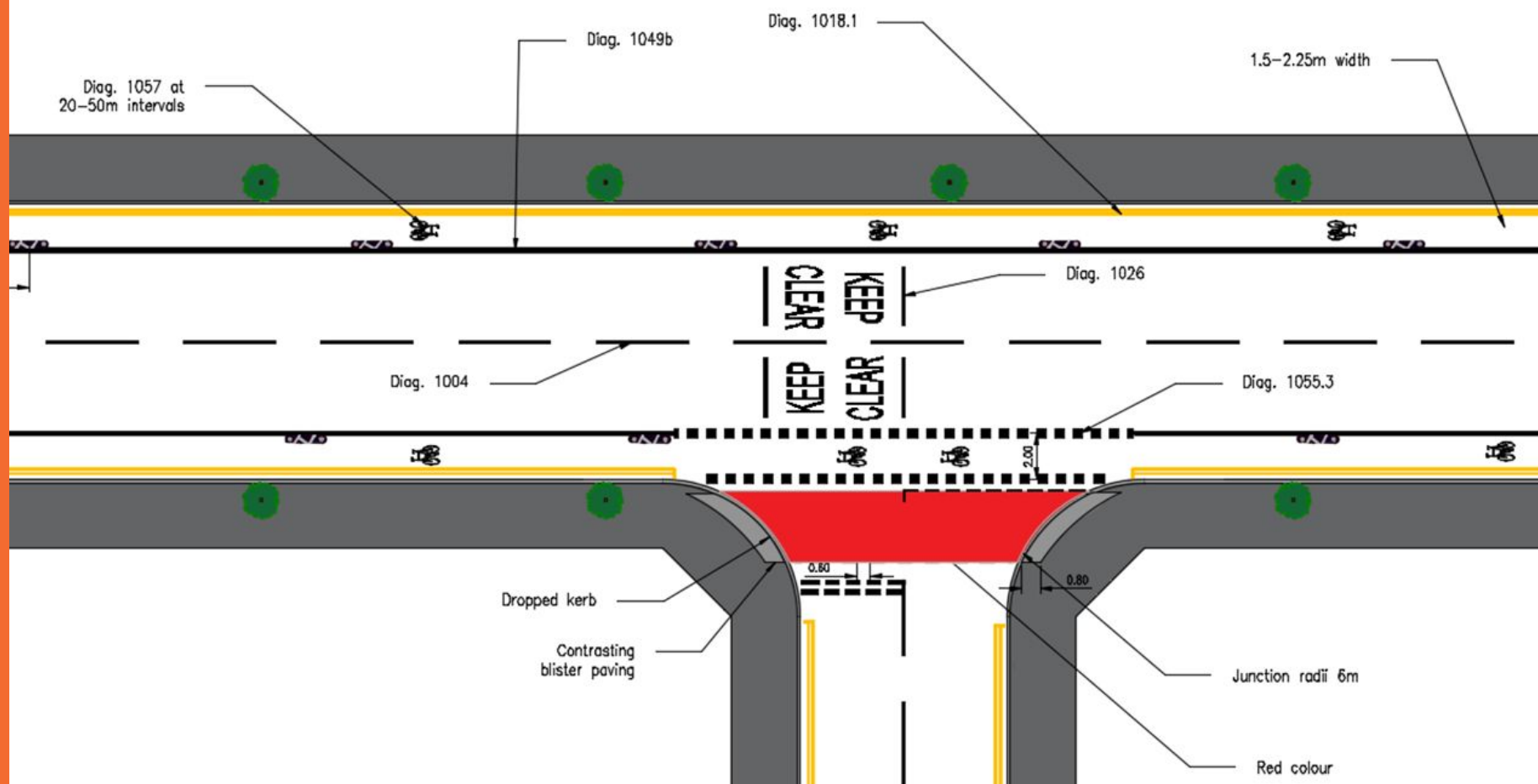
WIDTHS

MEASURES

PROJECTS

JUNCTIONS

Temporary Side Road Treatment



LAW

WIDTHS

MEASURES

PROJECTS

JUNCTIONS

TEMPORARY MIXING ZONE

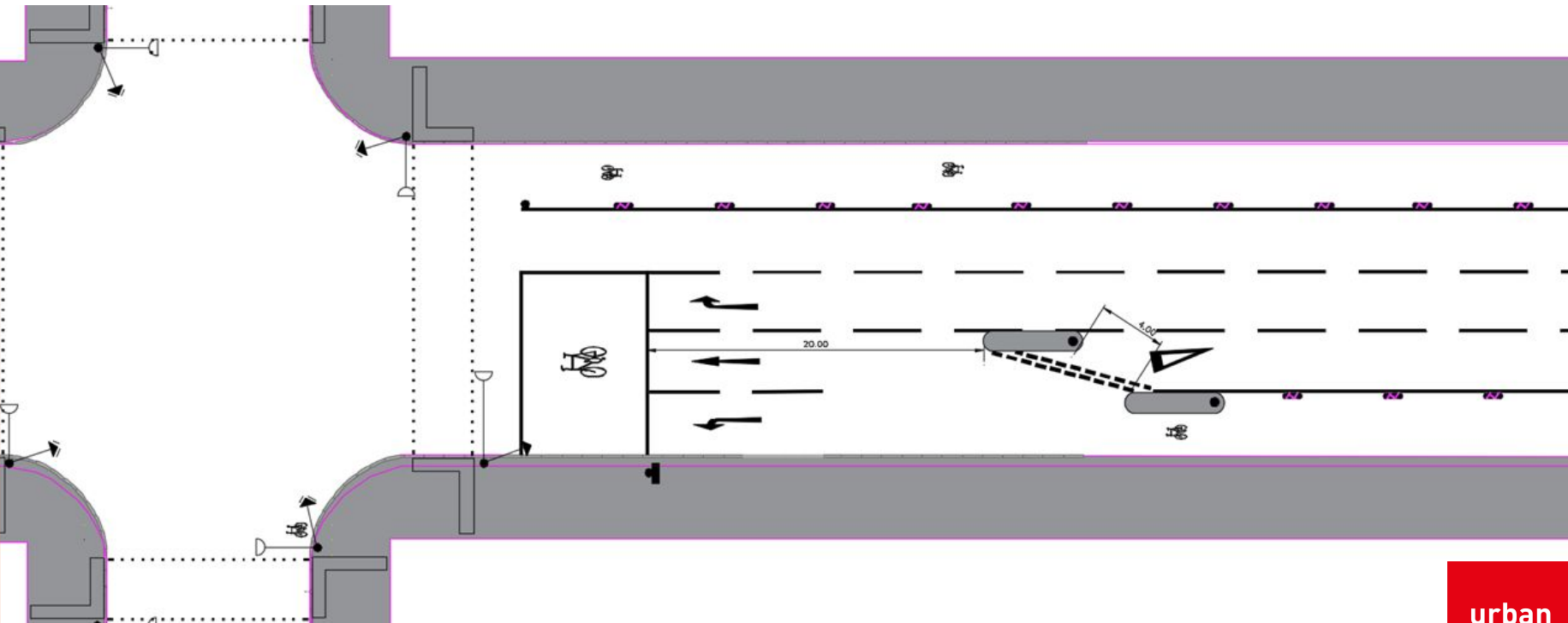
Temporary Mixing Zone

On the approach to junctions cyclists may need to position themselves defensively in order to move ahead.

This temporary option prioritises the movement of cyclists towards the junction stop line by creating a smaller junction downstream so that the transition can be made on the approach.

Cyclists who stay on the nearside are at the greatest risk of left hook collisions and so this approach prioritises the transition in position on the approach.

Note that no cycle symbols are used in the transition area as position must be decided relative to other traffic. For drivers the give way should warn them of a potential conflict and raise awareness of the upcoming interaction.



LAW

WIDTHS

MEASURES

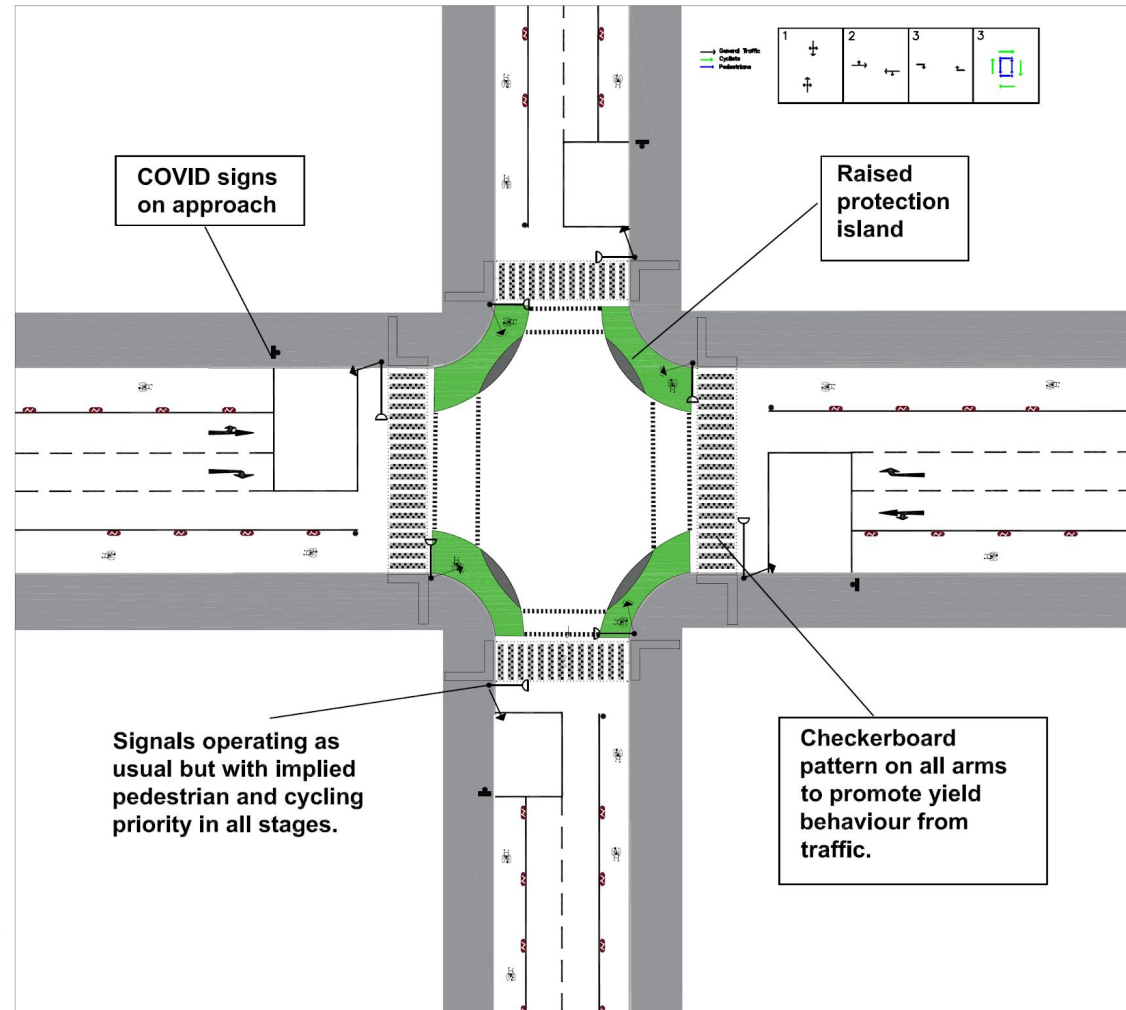
PROJECTS

JUNCTIONS

Temporary Active Priority Junction

This design aims to protect cyclists from left-turning vehicles.

1. In urban areas most pedestrians do not wait for the green man when crossing (if one has been provided). This is in large part due to the delay associated with waiting for a dedicated phase. The colourful crossing markings are used to warn drivers to watch out for this behaviour.
2. Cyclists following pop-up cycle lanes will arrive at signal junctions in the nearside position. Experienced cyclists may recognise this position as being the least defensive, and so may move into the flow of general traffic to use the junction. Inexperienced cyclists may stay on the nearside. This position increases the risk of being hit by left turning vehicles. Protection inside the junction is suggested so that cyclists can wait in safety with a clear view of the junction and decide when to cross.
3. Signal control does not change with this layout. Pedestrians who wait for the green man will have no drop in service.
4. The use of colourful crossings is now well established in the UK, as is the use of elephants footprints to highlight the route for cyclists and raise conspicuity.



LAW

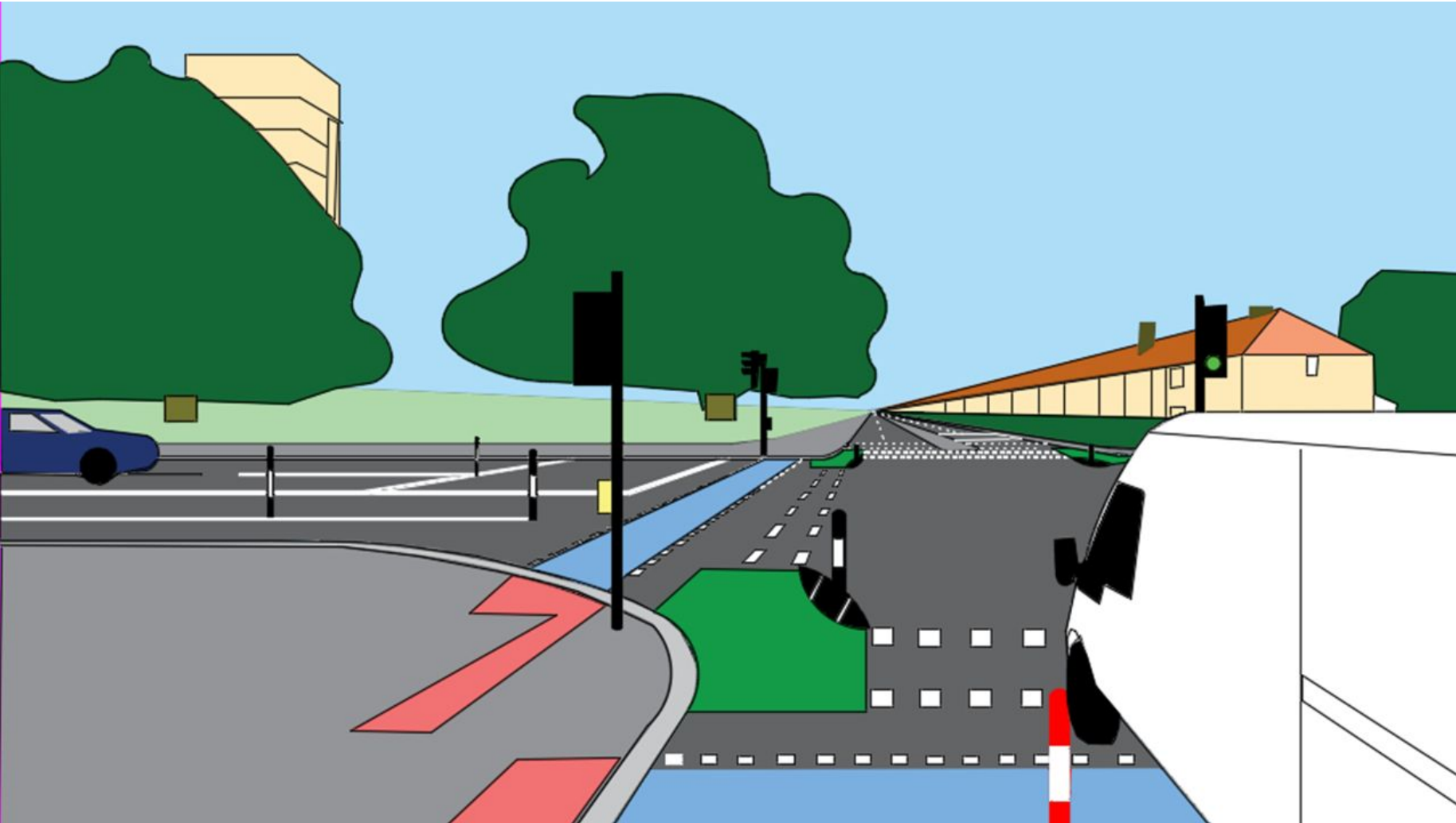
WIDTHS

MEASURES

PROJECTS

JUNCTIONS

TEMPORARY ACTIVE PRIORITY JUNCTION



Temporary Active Priority Junction

Cyclists are protected from left-turning vehicles.

LAW

WIDTHS

MEASURES

PROJECTS

urban
movement

SHOPPING STREETS

This section offers a set of standard designs for standard widths of streets including:

9m	30ft
12.2m	40ft
14m	~45ft
19m	~60ft

Different design options include

- Basic reallocation of space, including providing cycle lanes
- Changing from two way to one way traffic
- Segregated areas
- Slow Street
- Full pedestrianisation

About Slow Streets

Slow Streets is a design philosophy that effectively creates space by lowering traffic speed to a level that it does not dominate the urban environment enabling other function to operate alongside and within the traffic corridor. Slow Streets work on similar principles to Pedestrian Priority Streets, which are outlined in the CIHT 'Creating Better Streets' review (2018), and epitomised in the 2019 Healthy Street of the Year: Frodsham Street, Chester.

High Streets, where some level of vehicular access is required, are difficult streets to design, with multiple functions and where everyone is a stakeholder. A high proportion of High Street users struggle to walk long distances so buses, taxis and Blue Badge holders often need access, or sometimes through traffic must be accommodated.

Slow Street design frequently relies on counter-intuitive safety principles that expose pedestrians to the traffic making drivers feel personally responsible for people's safety, changing driving behaviours. Slow Streets can change function at different times or days into other sub-forms made possible by the quick, light, cheap and adaptable infrastructure of Tactical Urbanism, these might be described as Dynamic Streets and could include: Market Streets; Evening Streets; Lunch Streets.

LAW

WIDTHS

MEASURES

PROJECTS

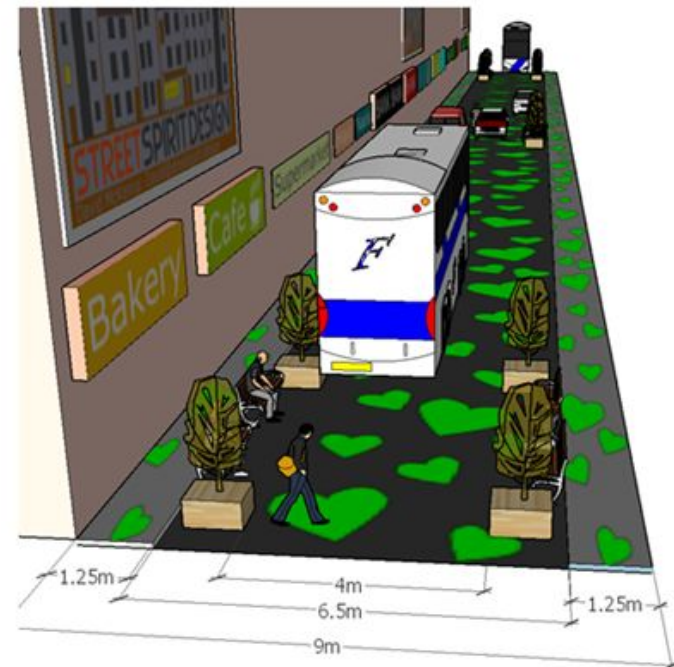
SHOPPING STREETS

9m SLOW STREET



9m - slow street

- Pedestrians must be comfortable walking in the carriageway as there is no space on the footway to accommodate people passing or queuing
- No cycle lanes - no overtaking of cycles by vehicles
- Tree planters create pinch points only allowing one direction of vehicle at a time, avoiding a priority direction to reduce speeds



LAW

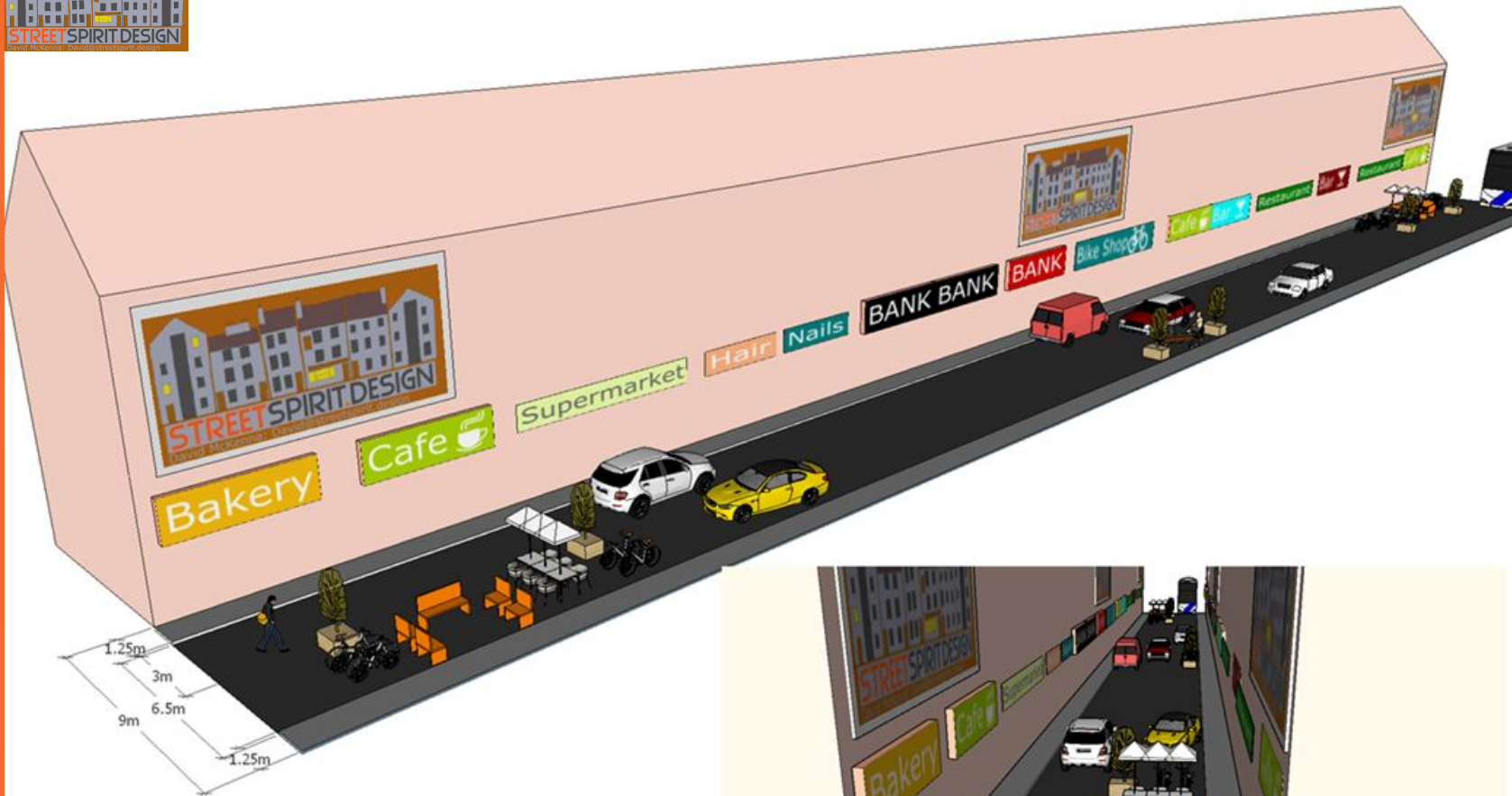
WIDTHS

MEASURES

PROJECTS

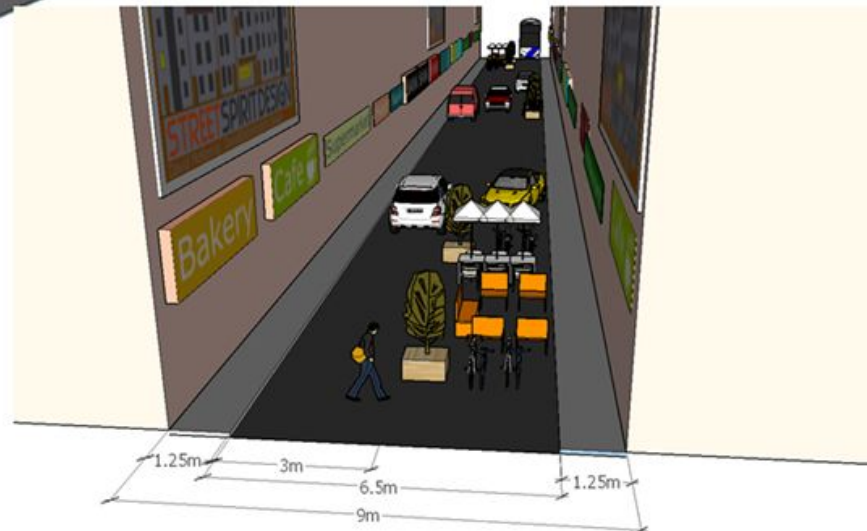
SHOPPING STREETS

9m SLOW STREET WITH PRIORITY PINCH POINTS



9m - slow street with priority pinch points

- No space for footway widening
- Vehicles slowed by pinch-points
- Drivers more aware of pedestrians due to open seating
- Cyclists in carriageway



LAW

WIDTHS

MEASURES

PROJECTS

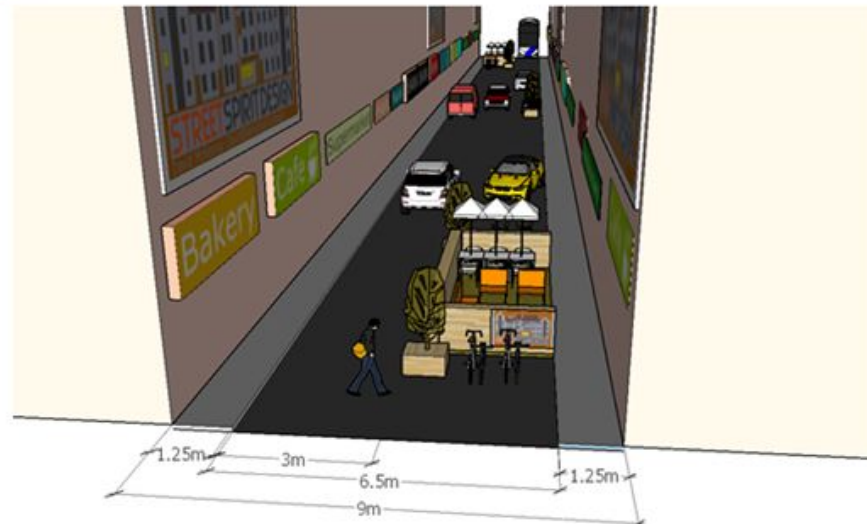
SHOPPING STREETS

9m SLOW STREET WITH PARKLETS



9m - parklets create priority pinch points

- No space for footway widening
- Vehicles slowed by parklets
- Drivers more aware of pedestrians
- Cyclists in carriageway



LAW

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SHOPPING STREETS

9m SLOW STREET WITH PRIORITY PINCH POINTS



9m - slow street with priority pinch points

- No space for footway widening
- Vehicles slowed by pinch point
- Drivers more aware of pedestrians due to open seating and painted carriageway
- Cyclists in carriageway



LAW

WIDTHS

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SHOPPING STREETS

9m (30ft) BYELAW STREET



LAW

WIDTHS

MEASURES

PROJECTS

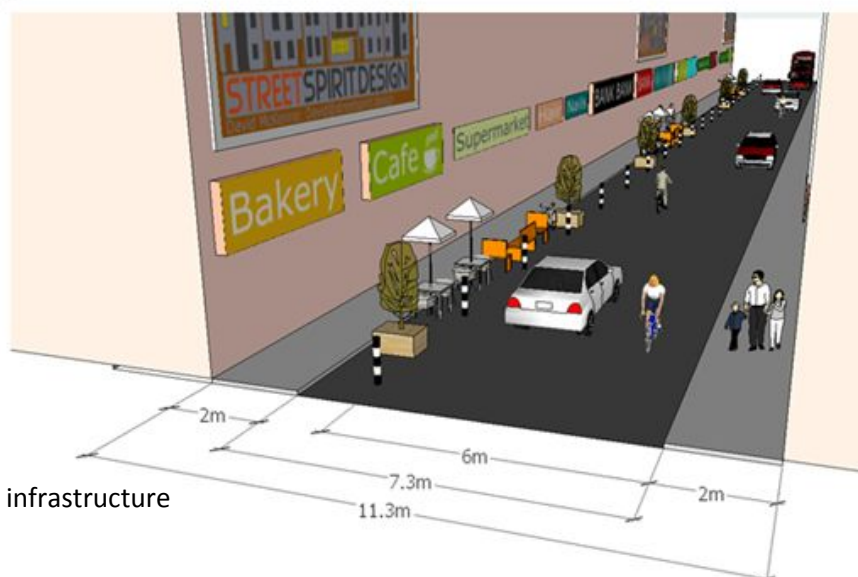
SHOPPING STREETS

11.3m WIDENED FOOTWAY



11.3m - two-way, foot widening one-side

- 7.3m carriageway
- Footways widened one side with limited social infrastructure
- Cyclists in carriageway



LAW

WIDTHS

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SHOPPING STREETS

12.2m (40ft) TYPICAL PLANNED VISTORIAN



LAW

WIDTHS

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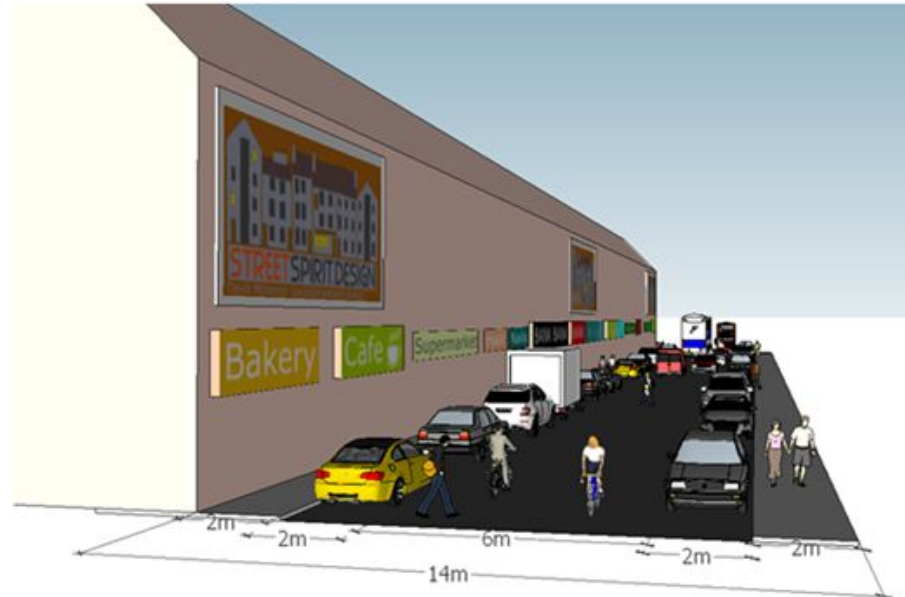
SHOPPING STREETS

14m CAR OPTIMISED



14m - basic layout parking both sides

- Queuing must be accommodated on footway with pedestrians
- No widened footway
- No space for social infrastructure
- No cycleway



LAW

WIDTHS

MEASURES

PROJECTS

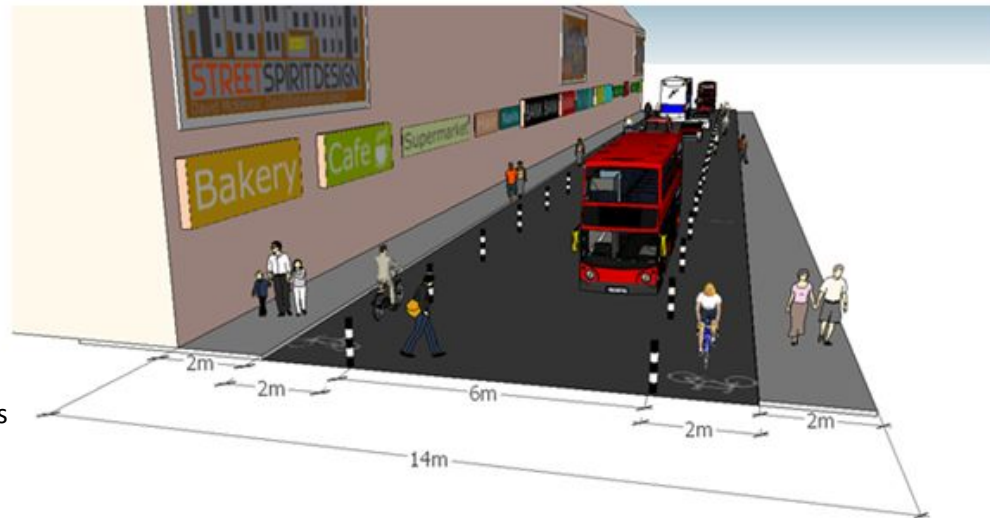
SHOPPING STREETS

14m CYCLE LANES



14m - cycle lanes on both sides

- Queuing must be accommodated on footway with pedestrians
- No widened footway
- No space for social infrastructure



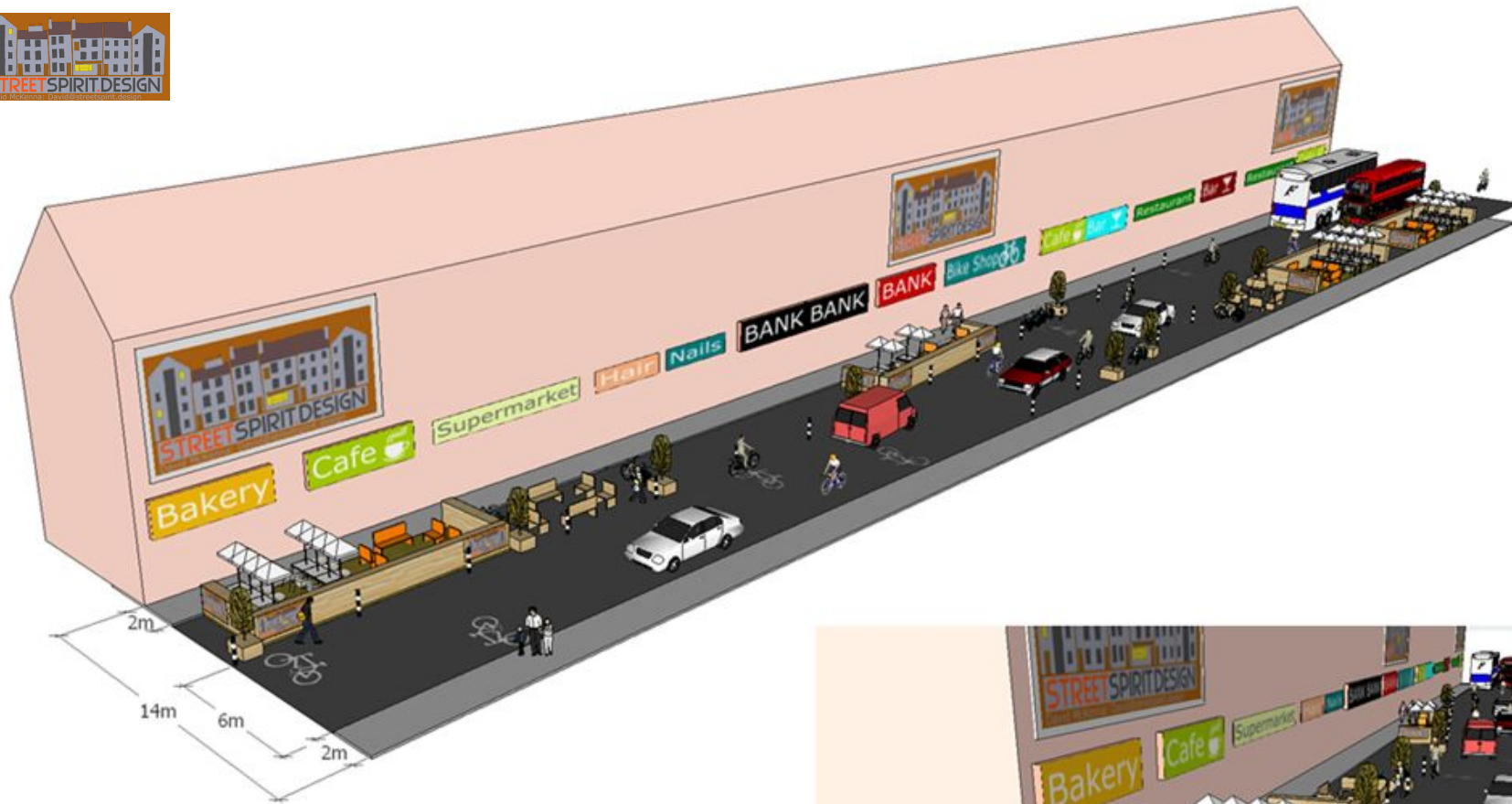
LAW

WIDTHS

MEASURES

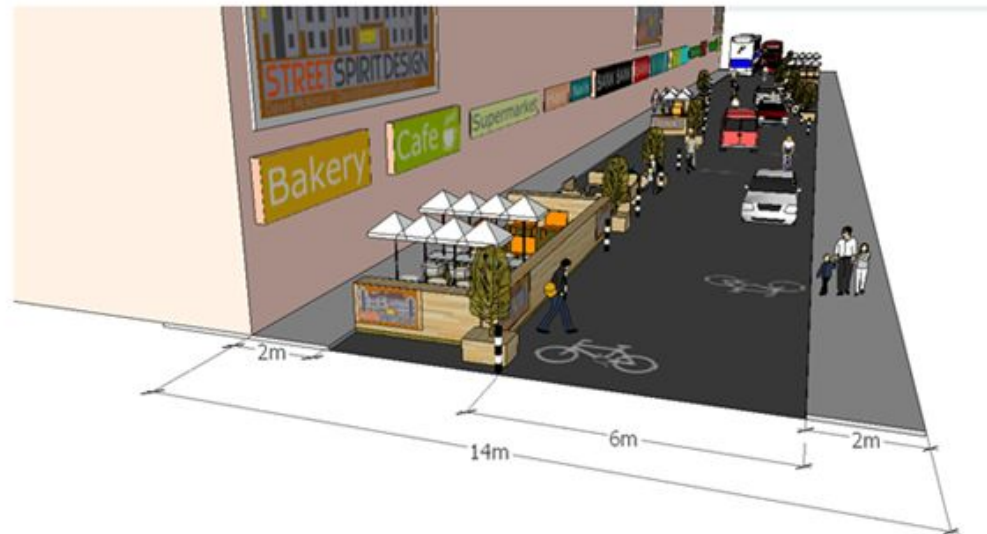
PROJECTS

SHOPPING STREETS



14m - one-sided widened footway and social infrastructure (switching sides halfway)

- Queuing space accommodated on footway with pedestrians
- No cycle lanes - no overtaking of cycles by vehicles
- Tree planters and wands define carriageway
- Other street furniture set back 450mm from carriageway edge



LAW

WIDTHS

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SHOPPING STREETS

14m MEANDERING SLOW STREET



14m - meandering slow street

- Pedestrians freely crossing the carriageway but not walking down the carriageway
- Parklets or seating/dining areas open up to carriageway
- Queuing space accommodated on footway with pedestrians
- No cycle lanes - no overtaking of cycles by vehicles
- Tree planters define carriageway. No wands to reduce highway character
- Other street furniture set back by 450mm from carriageway edge



LAW

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SHOPPING STREETS

14m SLOW STREET, CENTRAL SOCIAL INFRASTRUCTURE



14m - slow street, central social infrastructure

- Pedestrians walk in carriageway. Design speed 8mph
- Queuing on footway with pedestrian movement
- No cycle lanes - no overtaking of cycles by vehicles
- Tree planters and wands define carriageway
- Other street furniture set back by 450mm from carriageway edge



LAW

WIDTHS

MEASURES

PROJECTS

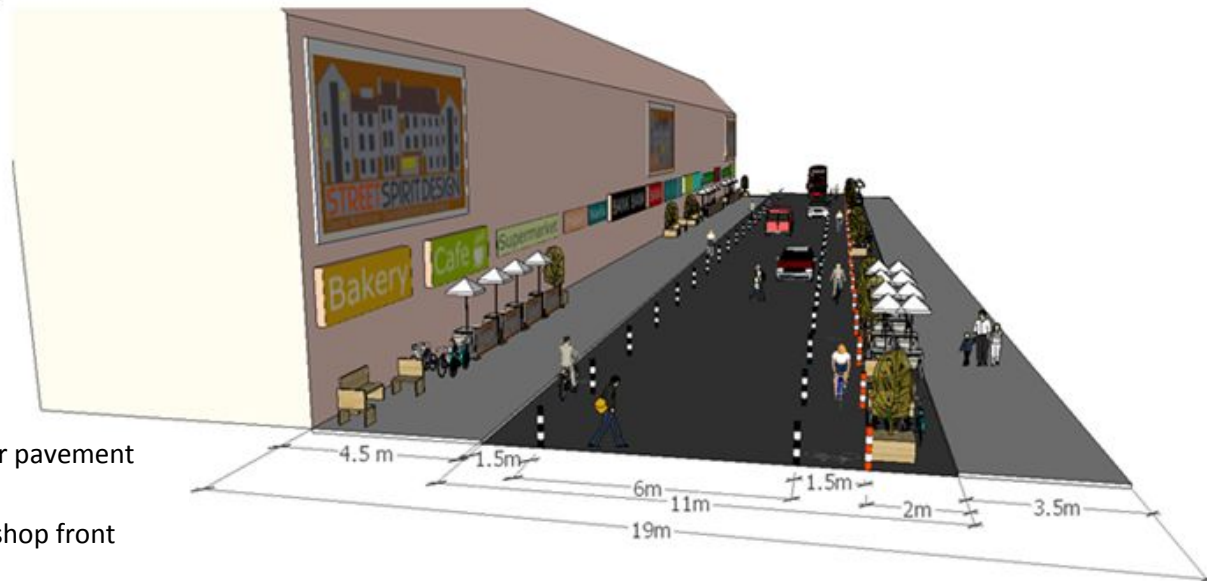
SHOPPING STREETS

19m SEGREGATED STREET



19m - segregated street

- Separate 1.5m cycle lanes
- Widened footway on the side of the narrower pavement with some social infrastructure
- On wider pavement, social infrastructure by shop front



LAW

WIDTHS

MEASURES

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SHOPPING STREETS



19m - footway widening and social space

- Queuing space accommodated on footway with pedestrians
- No cycle lanes - no overtaking of cycles by vehicles
- Tree planters and wands define carriageway
- Other street furniture set back by 450mm from carriageway edge



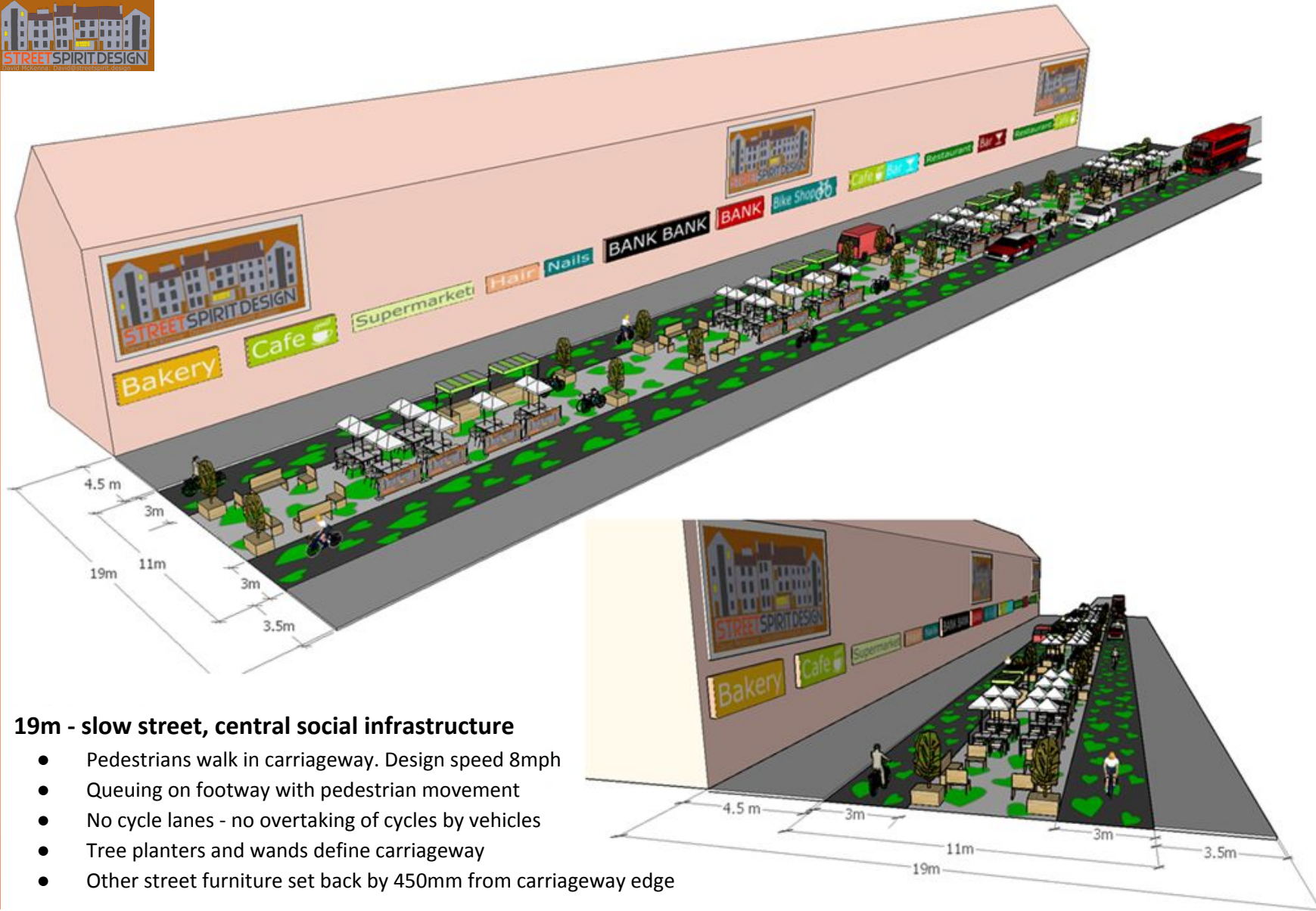
LAW

WIDTHS

MEASURES

PROJECTS

SHOPPING STREETS



19m - slow street, central social infrastructure

- Pedestrians walk in carriageway. Design speed 8mph
- Queuing on footway with pedestrian movement
- No cycle lanes - no overtaking of cycles by vehicles
- Tree planters and wands define carriageway
- Other street furniture set back by 450mm from carriageway edge

LAW

WIDTHS

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END