**London Cycling Campaign response to**

**the London Cycle Design Standards Consultation August 2014**

The London Cycling Campaign welcomes the opportunity to comment on the new London Cycle Design Standards.

We share the view expressed in the Guiding Principles of the document that ' it will take consistent commitment to the quality and ambition of cycling infrastructure design to realise The Mayor's Vision for Cycling.'

The growth of cycling in London has highlighted the need to deliver roads that are 'as safe and inviting for cycling as those in Holland' – the LCC pledge that all 2012 Mayoral candidates backed. Good road design is at the heart of enabling the quarter of Londoners who say they want to cycle or cycle more to do so.

The design outcomes underpinning the new LCDS – safety, directness, comfort, coherence, attractiveness and adaptability, draw on established continental practice, adding adaptability which is essential to accommodate the ongoing growth in cycling set out in the Mayor's Vision for Cycling. It can, if applied consistently and extensively, help London become a modern world class capital as well as place where cycling is the norm rather than the exception.

## Introduction

Overall the London Cycling Design Standards present an excellent framework for introducing new ideas and new procedures into the planning and building of a high quality cycling city in London. There are a great many parts which we find refreshing and very welcome after waiting for almost a decade for the previous design standards to be updated. Our response is built upon the comments and input from members and supporters on London Cycling Campaign. Many of those are infrastructure experts and others represent decades ofexperience working at a local level with highway authorities to represent the views of people who ride cycles in London every day.

While the majority of the detailed comments which follow are negative or in some way critical we ask that TfL accepts these comments as constructive criticism intended to help them and all the other highway authorities deliver the high quality international standard cycling infrastructure to which all political leaders in London have promised to deliver.

The 20 principles at start of LCDS highlight the importance of always designing roads and junctions that provide space for cycling. All traffic schemes, including parking provision, must take proper account of cyclists. As the Mayor's Vision for Cycling acknowledges, cycling has a vital and growing role in making London a

leading modern capital. Enabling all those who wish to cycle (a quarter or more according to surveys for TfL) can help to transform London and meet the transport needs of its rising population as well as addressing health problems.

We welcome the innovative, in the UK, designs proposed in LCDS such as parallel cycle and pedestrian crossings, cycle streets, traffic signals to eliminate left turn collisions, cyclist specific traffic lights and we commend TfL and the Mayor's team for lobbying the Department of Transport to draft the legislation required to implement such measures. Notable too is the Level of Service matrix which, if applied consistently and intelligently, will enable highway authorities to assess the current state of their roads from the cyclist's perspective, determine the improvements that must be made and then assess them.

Some section of the draft LCDS refer to forthcoming changes in legislation, traffic signs regulations, permissions and procedures for implementing innovative designs. As a result some sections need updating and will continue to need updating as rules, context and policies change. We see the LCDS as a live document that should be subject to continual revision. That is the only way that innovation can continue to be brought into play for transforming London's street infrastructure. A task that is many decades over due.

**General comments**

While there are many useful and important changes in the new LCDS there are also elements that can be improved and others that need to be added. We provide our views on this in the specific comments in the tables below.

It needs to be made absolutely clear that these standards apply to all streets in London, not just to cycling schemes funded by the Mayor's Vision for Cycling programme

The section on junctions is of particular importance given that that is where most collisions occur. We note and welcome the wider range of junction options mentioned in the new edition of LCDS. Given the commitment to continental best practice, however, and the lack of good examples of junction solutions in the UK, the section needs to be expanded in terms of detail (diagrams, links, measurements, photos, applications) and the range of options. It must be remembered that LCDS has to cater for a growing cycle network and providing only a glimpse (photo or illustration) of what could be done such as a junction with island protection (p 164) or two stage crossings (p 166) will not give London planners and engineers the confidence to propose and implement continental type solutions.

We note that the Dutch CROW cycle infrastructure manual allocates 68 pages to the provision of detailed information on junctions (function, application, implementation, dimensions, considerations, alternatives plus drawings and dimensions). Dutch cycling infrastructure designers can thus rely on this material confident that all

highway engineers and signals engineers will be familiar with such best practice and be able to contribute to successful junction implementation.

In view of the acknowledged poor provision for cycle users on London roads, some of which is recent, the document must make clear that traffic schemes must never increase road danger to cyclists and that any proposed change that could endanger or cause other dis-benefits to cyclists must be notified to the TfL cycling team at the earliest possible stage. We note that the previous LCDS contained a specific paragraph (p 14 1.4.18) requiring highway authorities to notify a cycling specialist if any scheme on a marked cycle route (blue and yellow routes on the London Cycling Guides) caused dis-benefits (defined in terms of ' access, interruption, obstruction, journey time, loss of priority or destabilisation') to cyclists. It is unacceptable for traffic schemes to reduce the level of service to cycle users.

The new LCDS makes extensive references to improved conditions for cycling in the flagship Mayoral programmes however it also needs to emphasise that any new traffic scheme, notably large schemes, needs to deliver benefits for cycling given that the Mayor, and national government (LCDS 1.3.15) want this mode of transport to grow in popularity.

The document should be shortened overall, mainly by ruthless eradication of duplication. Principles must be clearly separated from technical specifications.

Mentioning specific funding streams and programmes practically guarantees that the document will become obsolete quickly. Different types of provision or routes should be referred to in general terms instead, possibly by the type of cyclist targeted.

Given the Mayor's desire to 'de-lycrafy' cycling the document needs to be reviewed to make it clear both visually and in the text that the LCDS is aimed at all cyclists and potential cyclists. We note for example that LCDS 2014 refers to both cycles and bicycles and hand-bikes and hand-cycles. Cycles and hand-cycles are the more inclusive terms and hand-bike is a misnomer. The photographs in LCDS show very few adapted cycles.

## KEY ISSUES

### Cycling Level of Service

The core element of LCDS is a Cycling Level of Service measure. It enables highway authorities to check the standard of provision for cyclists at present and to judge how various new measures could improve it. Heavy turning traffic at junctions, for example, is rated as 'critical,' some conflict as 'basic,' significant reduction of conflict as 'good' and elimination of conflict as 'highest.'

What LCDS describes as 'basic' would undoubtedly be labelled as 'inadequate' in Holland but the principle of rating provision for cycle users has merit. In Copenhagen the authorities go a step further, publishing an annual bicycle account.

A junction assessment tool is also presented in embryonic form..This needs to be given metrics and expanded to examine and assess a full range of designs including providing separation of cyclists in space and or time to create calmer, safer junctions.

**Junctions, Roundabouts and Eliminating left turn danger**

The 'Hold the left turn' design that reduces the danger of the infamous left-hook collision is described yet the draft document is not strong enough on how this and other innovations can be best used on London's main roads. Regrettably the design guide stops short of providing London planners and engineers with more detailed diagrams, dimensions and applications of the continental and other new designs. There are also junction solutions that are not included at present- the Dutch CROW infrastructure manual devotes 68 pages to the technical details of various junction treatments.

**Design Guide Format**

We note that the new LCDS differs from the previous edition in not taking the format of a manual for engineers with accompanying drawings, dimensions and a more detailed prescription of suitable solutions for particular types of location (like the well established Dutch CROW Design manual for bicycle traffic). Indications from practitioners are that a ‘design manual’ approach would assist their work. Continental manuals, which are not tied to specific headline cycling programmes, usually adopt the format of first looking at network design, main cycle routes, leisure routes, integration of routes and then, as in LCDS, examining links, junctions, construction, maintenance, parking and evaluation. The pitfall of direct references to specific current programmes is that they may change in title or format.

Advantage should be taken of the document’s on-line format. Greater use of links to overseas and UK good practice would be helpful. All photos, drawings, figures and tables should be numbered and indexed. An overall index would be helpful along with appendices that provide the relevant text sections from documents mentioned in LCDS.

**Eliminating red tape**

The draft LCDS takes advantage changes in the national rules on signs and regulations and the plans to reduce red tape in the way new ideas can be tested and used. A range of continental junction and street designs which, thus far, have been a

rarity in the UK are included. You will find illustrations of Dutch style roundabouts with separated crossings for cyclists and pedestrians, Danish style two stage right turns, junctions with protective islands at each corner, cycle priority streets, low level cyclist light signals and priority crossings that include a pedestrian zebra with an adjacent cycle crossing.

**Coherent networks**

Unlike the earlier edition of LCDS the new version allocates significant space to planning cycling networks. Practitioners are provided with guidance on creating a fine mesh of permeable street for cycle users as well as providing protected space on busy roads and removing barriers. The document also makes clear that consultation with stakeholders should take place at a meaningful stage in the design process, not after there is no scope for change.

**Missing elements.**

As already noted there is a lack of construction detail and easily understood diagrams to illustrate the many new concept discussed. Traffic calming is dealt with far to briefly. Reducing the danger to cyclists and pedestrians from motor traffic is key to transforming the travel choices for the majority of Londoners. There should be a full exposition of dozens of different types of traffic calming setting out the advantages and disadvantages of each one.

The should be guidance on how the Cycling Level of Service and Junction Assessment tools must be used to evaluate all traffic schemes and to create and area wide appreciation of what is needed to provide safe and inviting space for cycling in London.

There is far too little on wayfinding. Cycling in London would be far more attractive if we could all find the best quiet routes.

The design standards should give clear guidance on how planners can move from the existing motor traffic dominated streets in London towards high quality, greener street environments.

**Specific comments**

**Chapter 1**

| Paragraph or Page | Comment | Suggested Text change |
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| Raising Standards | | |
| P1 | An index should also be provided | |
| P1 | A list of organisations to consult on traffic and cycling schemes must be provided in an appendix | Expand 2.1.10 in appendix |
| P3 summary of requirements | | 3. prioritise cycling |
| Good Design OutcomesP5 | These illustrations do not reflect the subsequent usage of the design outcome titles e.g p 47 p 59 e. It should be clearer that this section is merely illustrative of the range and extent of problems we face in London and is not part of the Design Standards which begin with the Principles | |
| P 5 Fig 1.2a Safety | | Change 'and address negative perceptions about safety' to 'and make cycling feel safe and appealing to all'.<br>Remove 'for the majority of cyclists'. |
| P 6 Fig 1.2b Coherence | | Add, after consistent, 'link seamlessly to other routes' |
| 1.11.1 Requirement 1 | | 'Must' must replace both uses of the word 'Should' |

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| 1.1.5 | While LCDS does carries no legal obligation Highway authorities must be made aware that they should follow best practice which includes meeting LCDS guidance` | |
| Guiding principles P7 | Strongly agree that cycle infrastructure must cater for future growth. Data from Islington shows flows of more than 1400 cyclists per hour at one junction. | |
| P7 Principle 1 | | Add 'Our streets must be made appealing and accommodating to children, the disabled and the elderly to travel on by bicycle'<br><br>para 2 – remove 'especially in the centre' |
| P8 principle 3 | Legally bicycles are vehicles but they are not the same as motor vehicles and need separate consideration. Being human powered they present a far lower hazard to other road users than motorised vehicles. For people new to cycling and children the natural progression is from walking to cycling on pedestrian spaces totally separate from motor traffic.<br><br>Cycles are a separate class of vehicles that share vulnerabilities with pedestrians. Design approaches, particularly in parks and in leisure areas need to be differentiated. Shared use on off-road paths where volumes of cyclists and pedestrians are low can serve to encourage courtesy.<br><br>All transport networks require, at minimum, shared space and transition areas. In countries with best practice cycling provision shared space is an essential element at minor road junctions and quiet areas. | Principle 3 needs to be revised to set out the requirements for success for shared spaces. There should be input from pedestrian representatives, |

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| | In the UK pedestrians have the right to walk on any section of the highway, and they do. Every section of highway designated for cycles should be expected to be shared by pedestrians. As set out in principle 7 the key to successful shared space is minimising differences in speed. In many places in London shared paths away from motor traffic work well without separating cyclists from pedestrians, where strong delineation is put in there is a tendency for cyclists to ride faster and the potential for conflict increases. | |
| P9 principle 4 | 'alternative forms of separation' are not explained. | |
| P9 principle 5 | 'semi-segregation' must not be used as an 'easy' solution. The Dutch state that they 'mix where possible (locations that are safe from the perspective of low car volumes and speeds), and separate where necessary (anywhere where car volumes are high and speeds above 20mph),' which they contrast with separate where is it easy to do so and mix where it isn't.<br><br>Segregation must consider the needs of cyclists turning off the route to a destination or minor road. | |
| P9 principle 6 | There must be a coherent network of routes integrating Superhighways, Quietways and other cycle routes. Routes must include primary roads where these include popular destinations. | |
| P 9 principle 7 | This principle is key for the majority of minor streets where no intervention is needed beyond ensuring motor speeds are low and high volume rat running traffic is excluded. | |
| P10 principle 8 | Unless cycle routes lead to popular destinations, even those on narrow main roads, modal switch will be limited. | Add 'where quiet routes run parallel to busy un-treated |

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| | | roads, there needs to be provision to access facilities on the such roads and to cross them in a safe and appealing way. |
| P12 principle 16 | Quietways and other cycle routes on minor roads must be treated with the same regard as Superhighways. Alignments in particular are critical and these must be consulted with users. A single poorly designed junction can disrupt an entire route . | |
| P12 principle 18 | Designers must also consult with users including parents. Designers should have completed Bikeability training to level 3 | Add reference to requirement for consultation with users. |
| P12 principle 19 | In Denmark and Holland cycle route cleaning is prioritised in the winter in view of the potential danger. | Add: n winter clearing cycle lanes and tracks of snow and ice must be prioritised.<br><br>Add: Vegetation must be cutback where required. |
| Page 13, figure 1.3 | The infrastructure shown here is not good enough quality for a diagram to indicate what should be included in different contexts. | |
| Page 14, requirement 2a | Requirement 2a on classifying street types – should also take account of desired street types and possible changes – e.g. do we want to make somewhere less (or more) of a movement function | |
| Page 15, figure 1.4. | Conflation of semi-segregation and mandatory lanes can mislead. There's a difference between occasional small armadillos and planters/car parking. | |

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| 1.2.7 | Or the volume and speed of motor traffic can be reduced to a standard that permits integration with other vehicles (see LCC and CROW policy on vehicle volumes and speeds). | |
| 1.2.9. | A tutorial on usage of CLoS should be provided online. | Replace CLoS ‘may be used ‘with should be used |
| P 16 Requirement 2b | Schemes must meet the ‘good ‘CLoS as a minimum | |
| P 18 1.3.3 adaptability | | Delete ‘wherever possible’ |
| 1.3.4 – 1.3.6 | Quietways must be suitable for all cyclists. The level of intervention must meet the current and future needs of users.<br><br>Planned Quietway 38 for example attracts more than 1000 cyclists per hour at peak times – this represents a full cross section of cycle users and demands high levels of intervention at some locations.<br><br>The list of low cost interventions does not mention modal filters that have proved so successful in some parts of the capital.<br><br>The section appears to accept existing motor traffic volumes will not change. Motor traffic volume is not constant – it must be monitored on quietways; if too high should be reduced. Direct routes that can easily be ‘quietened’ should be. | |
| 1.3.8 bullet 5 | Suggested wording follows DfT LTN 01/04 | One-way streets should be made two-way for cyclists unless there is an unresolvable safety reason for not doing do |
| 1.3.9 – 1.3.12 | These points are already in Vision for Cycling | |

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| 1.3.14 | As previously stated both LCC, and the London Assembly believe the 5% modal share is insufficiently ambitious. | |
| P22 fig 1.5 | To assist with planning the figure should include the forthcoming London Plan 2014. Developers need to be aware that standards are changing<br>Improving the Health of Londoners is also a key document<br>(Manual for Streets DfT and TfL versions covered elsewhere?) | Add London Plan draft 2014, Health. Improving the Health of Londoners 2014 |
| Page 23 | 'The Disability Discrimination Act 1995 (DDA) and the subsequent Equality Act 2010' – it should be made clear that disabled cyclists as well as disabled pedestrians are to be considered in both planning and design. There is an assumption in parts of the document that disabled people are not cycling. | |
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**Chapter 2 Tools and techniques**

| Paragraph or Page | Comment | Suggested text change |
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| 2.0 | The guidance in this chapter applies to all roads not just cycle routes. Filtered permeability offer benefits to cyclists and walkers beyond designated cycle networks. This should be made clear at the outset.. The LCDS should be part of the designer's toolkit for all roads in London. Figure 2.1 should reflect this. | |
| 2.1.4 | This list restricts the network to current flagship programmes. Existing infrastructure, locally progressed facilities including the no-primary Mini-Hollands (Richmond, Newham, Bexley, Ealing etc.) and off-road routes can all contribute substantially to creating a network | |
| P27 fig 2.2 | LCC agreed policy as regards main cycle routes is to define heavily trafficked as more than 2000 PCUs per day. As noted before managed reductions in motor traffic or modal switch can convert heavily trafficked roads to less busy ones. | Delete both cases of 'ideally' in brackets |
| 2.1.9 | Strongly support this point. Consultation with cycle user groups should be mandatory. | |
| 2.1.10 | | Add: schools and colleges<br>Provide link to full stakeholder contacts in an appendix |
| Page 29 | CLOS should ALSO be used, at minimum, to monitor quality of 'Prestige and Primary' (as defined by TfL) network routes and maintain or improve quality where changes are made.<br>CLOS should be used to establish quality of nearby routes – i.e. if there is a good nearby parallel route, improvements may not be so | |

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| | urgent; if not, they will be. | |
| 2.1.17 | The scoring system needs retitled to reflect the fact that the 'basic' category does not generally meet a basic standard that is acceptable on the continent or laid out in the 20 general principles of LCDS. If facilities are isn't acceptable – 'basic' here refers to very poor and potentially quite dangerous routes. Also, | |
| 2.1.18 | | Change to say: Clients must exceed a zero score |
| 2.1.25 | Is the green designation supposed to indicate safe passage for children? | |
| P 31 Fig 2.3 | CLOS matrix. In general this needs to be more ambitious. Describing a situation where, for example, 'Side road junctions [are] frequent and/or untreated. Conflicting movements at major junctions [are] not separated,' is not a basic level of service – it is more accurately identified as poor. If Basic were be re-titled 'poor' and good 'basic' practitioners would recognise the need to make improvements.<br><br>The critical width for a large vehicle to overtake and give a safe margin to a cyclist riding safely away from the curb is 4.4 m and over. See section 3.1.13<br><br>The flow numbers should not be in motor vehicles per hour but rather in daily PCUs. 200 VPH could mean 2000 vehicles per day many of which could be large.<br><br>Value of time criterion – how will this be assessed? Reference needed<br><br>Wayfinding in London is an essential thus consistent signage needs to be included under the Basic and Good levels of provision | Change ' Cyclists in wide (4m+)' to Cyclists in wide (4.5m+)<br><br>This width adjustment needs to be applied throughout the whole LCDS. |
| P 32 Fig 2.3 | Provision for adapted and cargo cycles should | |

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| | be included as an CLoS indicator | |
| P 34 fig 2.4 | This example suggests that left turns on arms with two motor traffic lanes are low risk. Unless these were to have separate light phases for cycles the left hook risk remains. | Review diagram |
| 2.1.20 | As LCC has often argued collision rates per cyclist journey reflect risk more accurately than number of collisions. Collision data should be collected as a rate per road user over a time period to give statistical significance. Bare 36 month casualty counts are not appropriate with 21st data handling capacity.<br><br>Cyclists may avoid areas where the perceived risk of road danger is high. Stakeholders must be consulted to ascertain the 'attractiveness' of a route if barriers were removed. | |
| 2.1.22 | The Junction Assessment tool is the weak partner of CloS. It needs to have a robust scoring system and to be extended bringing in a wider range of conflict analysis and the full set of possible treatments to provide protected space and/or time for cyclists. | |
| 2.2.3 – 2.2.4 | The data gathered must include information about cycle flows and local knowledge from current cyclists. Some unmarked routes and crossings attract high cycling volumes.<br><br>Cycle hire aps, Strava and Cyclestreets can all provide additional information about routes and usage levels by specific groups of cycle users. | |
| 2.2.10 | In London this classification, based on official motor vehicle route designations, can be very misleading. High volume rat runs on secondary roads, for example, can represent high levels of road danger (including LGVs and HGVs) in constricted space. Any assessment of roads must consider volume and speed data as well as vehicle types.<br><br>All streets should be assessed by the CSNA Bikeability level mapping process, or an equivalent objective measure. | |

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| 2.2.10 – 2.2.11 | Are two levels of porosity needed? Not much good if an area is E-W porous but you want to go N-S.<br>Barriers to be considered must include waterways and rail lines | |
| 2.2.12 and fig 2.12 | The replication of the map from fig 2.11 implies that all secondary roads offer a 40-70% level of service which is unlikely to be the case. | |
| 2..2.15 | Useful example | |
| P 44 Figure 2.13 | Need to distinguish between Pedestrian Streets and No Motor Vehicle Streets (where cycling is allowed). | |
| 2.2.16 | Other examples include Islington and Ealing. Care must be taken to show all through cycling routes even if they are marked as dead ends for cars. | |
| 2.2.21 | The zone around Westfield Stratford is an example of tokenism. Houten in the Netherlands illustrates a contrasting approach. | |
| 2.2.24(note numbering error in LCDS – switches from 2.2.21 to 2.5.22) | Developers should provide a map of CLoS indicative ratings for their cycling network and it's links to surrounding cycle routes | |
| 2.3.2 | A Non-motorised User Audit and/or a CLoS assessment should precede schemes<br>Local cycle user groups should be consulted at an early stage – as long term local residents they may be aware of relevant developments and previous obstacles to route design. | |
| 2.3.3 | Signal planning proved an obstacle during the London Cycle Network+ programme. It must be prioritised during current programmes.<br>Imprecise traffic model outputs which exclude | |

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| | slow modes and make no allowance for modal change must not be able to over-ride safety considerations and Mayoral policy objectives. The Model Auditing Process needs to be re-aligned with the Traffic Management Act requirement to prioritise safety and the DfT guidance to take account of policy..<br><br>We would like a recommendation for before/after studies and to establish how accurate modelling was. | |
| 2.3.5 | Road safety audits must consider the road danger on alternative routes if measures are not implemented or barriers to cycling not removed. | |
| 2.3.8 | Reducing red tape in cycle infrastructure implementation is very welcome. We support the new DfT proposal. | |
| 2.3.15 | This is confusing The legal situation is complex depending on land ownership, local by-laws. Often rights can be negotiated without a Cycle Tracks Order.. See http://www.bikehub.co.uk/featured-articles/cycling-and-the-law/ | Change footpaths to footways |
| 2.4.1 | We share the view that cycle route maintenance must be prioritised over other roads of equal degradation | |
| 2.4.3 | Defects could unseat a rider | Delete 'as budgets permit' |
| 2.4.5 | Standing water can conceal potholes and other hazards, and glass etc. will wash from centre of road to area where water is standing. | |
| 2.4.13 | Cycle users can easily be engaged to report faults and obstructions. Highway authorities must respond promptly to ensure positive feedback (LCC's Urban Cycle Parking website can be adapted for this purpose). | |
| 2.4.2 | Any upstand over 10mm is a problem – and a severe hazard if it's parallel to the direction of | |

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| | travel | |
| 2.4.3 | | Replace 'effect' with 'affect' |
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**Chapter 3 Cycle lanes and tracks**

| Paragraph or Page | Comment | Text |
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| | This chapter refers to mixed use as well as lanes and tracks . The equivalent in the CROW manual refers to 'road sections' as opposed to intersections.<br>Previous comments regarding width assessment in CLoS apply here. | |
| 3.1.3 | 'delivered in a way that is coherent and adaptable' does not follow | Delete 'delivered' |
| Understanding Cyclists Page 60 | More illustrations, or links to photos and videos, would assist this section and chapter.<br>Planners should seek views from under-represented groups e.g. disabled people, older people, women, people who want to cycle with their children. | |
| 3.1.11 | Minimum turn radius of 850 from LTN2/08 is too small for any cycle to maintain stability and balance. Maximum upstands on kerbs, notably those in parallel to cycle tracks, must be specified to prevent bad practice – 10mm max. | |
| 3.1.12 | Definition of width measurement should be specified here (kerb to centre of line in case of lanes) | |
| 3.1.14 | Widths for non-standard cycles should be referenced | |
| 3.1.15 | Preferred as well as minimum widths must be specified | |
| 3.1.20 | Moving car parking and reducing high flows must be preferred options. Section does not address how long cyclists should be expected to maintain primary position? Data is required on the effectiveness of desired outcomes when designing for primary positioning . | |
| 3.1.30 | As noted above street types can change over time. Provision of separate facilities depends on | |

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| | the speed and volume of motor vehicles. If these can be reduced separation may not be necessary | |
| 3.1.32 | Increasing degrees of separation require more complex junctions if increased risk is to be avoided. Furthermore cycle facilities should provide benefit to all types of cyclists. An increase in subjective safety should not be a the cost of extra delay which would entice many cyclists to choose a less safe route. | |
| Page 69 fig 3.4 | Part time mandatory lanes are not ‘dedicated’ | |
| Page 72-73 fig 3.7 | Item 3 | ‘Certain facilities (segregated tracks, shared space, cycle streets) will require special consideration where pedestrian and cycle desire lines cross’ |
| Page 73 fig 3.7 | Item 4. In some cases loading and access can be moved – for example to the back of the building (e.g. Stratford High St) | |
| 3.2.2 | This paragraph is unclear. As noted above Dutch planners advocate the use of separate facilities where it is necessary to provide them having considered motor traffic volumes and speeds. Short sections of segregation on a longer route are only acceptable if they mitigate the highest risks on the route. | |
| 3.2.6 | | Delete ‘very’ in very wide. |
| 3.2.9 | These dimensions are very low compared to Dutch guidance . The use of 30 cm verges on a new contraflow two-way track (cycles riding towards oncoming traffic) in the Olympic Park is very poor practice and must be discouraged. | |
| 3.2.10 | Elsewhere, it’s stated that a vertical obstruction | |

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| | like this reduces the effective width of a cycle facility by 0.75 metres. So actually it needs to be set back from the cycle track by at least this much unless the cycle track is already 0.75m wider than it needs to be. | |
| 3.2.12 | | Change second sentence to: 'Kerb segregation must be designed to cater for growth in cycle use. |
| 3.2.21 | 1.5m is likely to be too low even on Quietways. Some of the routes already exceed 1000 cyclists per hour at peak times.<br>If cyclists were running in the direction suggested, it would imply one-way cycle tracks on the right-hand side of the road. This is crazy and would make junctions even more dangerous. | Delete final sentence. |
| 3.2.23 | Two way tracks on one side of a road should only be used where there are no significant side roads or entrances, for example on bridges, along waterways and beside parkland. In all other cases the risk of 'wrong side' collisions is greatly increased. (Camden, Helsinki). Access to frontage activity on the non-track side exposes users to additional risk.<br>Dutch practice is to provide two way tracks on BOTH sides of dual carriageway roads. That allows two way access to frontage activity and most junctions are signalised or provide other protection | |
| 3.2.24 | High flow two way tracks must have sufficient width to prevent head on cyclist collisions | |
| 3.2.26 | | Insert 'few' before the word circumstances |
| 3.2.29 | Re-entry to the carriageway from the track must not endanger cyclists at the transition point | |

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| P 83 | Evaluation of two-way tracks is required | |
| 3.2.33 | Design speeds for tracks must be 20 mph as on the continent | |
| 3.2.42- 4 | Cyclists are very sensitive to changes in surface and only subtle changes are required. Granite sets or cobbles create a hostile cycling environment especially as movement with age can create dangerous upstands. Vertical deflection does not need to be up to 50mm and can extend less than on road humps. In all cases they must have a sinusoidal profile. | |
| 3.3.3 | High roads and connectors may require semi or full segregation if motor traffic volumes are high. | |
| 3.3.4 | The threshold for shared lanes is too high: 500 motor vehicles per peak hour can equate to 5000 per day. LCC advises traffic reduction or separation above 2000 PCUs per day on core cycle network routes such as Quietways. | |
| 3.3.11 | The aim at accesses is to make drivers give way to cyclists when entering or existing, not to make cyclists aware of the drivers. The lanes should be continued to deny drivers the right of way, albeit made advisory at that point (if necessary) so that drivers can cross legally.<br><br>Where a mandatory lane is 'broken' at a junction or access road it must be made clear that priority stays with the cycle traffic in the direction of the major road. This is set out in more detail in section 3.5 | |
| Indictative layout 3/03 | Bikeability trains cyclists to thake a central line through the gap unless there's space to overtake safely. If the gap is less than 4.6 metres, the cycle lane should widen out with cycle symbols near the middle of the gap itself. The layout shown encourages close overtaking of untrained cyclists. | |
| 3.3.17 | This proposed placement of armadillos wastes about 25cm (x2) of available road space | |

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| | compared with placing them on the solid white line, as they are in Royal College Street (as can be seen in the illustration on the same page). Arguably the insertion of black armadillos interrupts the white line and therefore makes it non-mandatory, but isn't that an argument for a change in the 'mandatory' definition? | |
| 3.3.22 | An illustration or link to one would be useful | |
| 3.3.23 | Right image is a poor illustration | |
| 3.3.26 | 'Floating parking bay is not show in diagrammatic form. Could be added to 3/08 | |
| 3.3.29 | | Change to: 'where the street is or could be made access-only for motor vehicles' |
| 3.3.32 | We welcome a TSRGD designation of cycle streets which should be accompanied by appropriate signage to prevent overtaking of cyclists.<br><br>The Islington example is a poor one. Motor vehicle volumes are high and the cycle lanes are routinely encroached on. | |
| P 104 | Unless bus volumes are very low, shared bus lanes should not form part of the main cycle network because of the reduced CLoS | |
| | | Change 4.0 to 4.5 |
| 3.3.42 | Automatic detection is preferable to push button | |
| 3.4 | Recommend Widths.<br>This whole section needs reconsideration and recalculation of advised lane widths. It sets out minimum widths and then shortly thereafter gives cases where these minima are not acceptable. | |

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| | The standards need to be recalculated to describe what works safely for cycling. For example 4.5 metres is the advisory width for sharing a lane with a bus or lorry. Narrower lanes may be ok for sharing with smaller vehicles unless tricycles, trailers etc are being used.<br><br>This section should set out the standard norms and then describe the special circumstances when these widths might be reduced | |
| P 109 fig 3.10 | Minimum width for shared bus lane should be 4.5m<br><br>Lane widths should consider cycle flows as in the Dutch CROW manual | |
| 3.4.18 | The illustrated cycle lane has been altered at time of writing | |
| 3.4.22 | Some duplication. Volumes of cycle users are more significant than ‘types’ | |
| 3.4.28 | It is common in the Netherlands for car parking or hangar type cycle parking to be located in between roadside trees. thus allowing space for cycle tracks. Such approaches could be considered in the UK. | |
| 3.5.4 | We share the view that the legal framework needs to be changed to reduce road danger from left turning vehicles by giving straight ahead pedestrians and cycles priority. Firstly this should be addressed by enforcement of existing rules. | |
| 3.5.5 | Additionallly measure should be taken to encourage driver to slow down before a turn.. | |
| 3.5.8 | Note, sections 3.5.8 – 11 only apply to one way tracks beside a road.<br><br>Why does this paragraph not advice the use of raised tables at junctions to enhance priority.<br><br>The provision of a 20metre segregation set back as at Stratford High street has failed to protect cyclists from turning traffic Drivers 'read' it as a wide radius turn and do not slow down | |

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| | on approach. | |
| 3.5.11 | This paragraph does mention raised surfaces but only in the context of stepped tracks | |

## Chapter 4 Junctions and crossings

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| 4.0 | Junctions are where most collisions and injuries occur. The primary design objectives should be calming and conflict minimisation. That should over-ride estimates of motor traffic effects in every case.<br><br>Advice on staggered junctions could be usefully provided including integration with of pedestrian crossings | |
| P 129 fig 4.2 | Given the existing high (as defined in LCDS) cycle volumes on some Quietways more substantial interventions will be necessary where required. | |
| P 130 fig 4.3 | Vehicle type is not defined (PCUs ? motor vehicles or cycles and motor vehicles? ) | |
| 4.1.8 | Must consider whether cyclists are avoiding the junction due to perceived road danger | |
| 4.14 - 17 | Tighter junction geometry helps slow turning movements. This is less true when turning from a multilane carriageway, large vehicles tend to start from right lane, which is misinterpreted by cyclists who see clear space ahead. In these situations further junction calming should be considered to reduce turn speed to absolute minimum. | |
| P 135 fig 4.5 | | Add: crossing between shared use pavements or cycle tracks |
| 4.2.4 | Corduroy ribbing can create danger of slippage particularly if in line with a cycle track. | |
| 4.2.5 – 4.2.6 | Uncontrolled crossings in the typology gives priority to motor vehicles and is described as the first choice option. This may not be a suitable first choice for either Superhighways or Quietways given the existing and planned volumes which may exceed motor traffic volumes. | |

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| | The option of a cycle only priority crossings should be added to the list and negotiated with the Dft. Such crossings will be required on the Quiteway network. Crossings must provide safe passage for vulnerable road users. | |
| 4.2.7 | Cyclist turning movements must also be considered | |
| 4.2.9 | Is there a legal reason for not using a yellow box at a cycle crossing? | Add after Keep Clear : 'or yellow box' |
| 4.2.12 | As noted above a similar cycle priority crossing but for cycles only would prove useful at some crossings | |
| 4.2.14 | Where cyclist turning movements are likely a shared crossing would reduce the risk of conflict between pedestrians in shared space at either side. | |
| 4.2.15 | Why not recommend the shared crossing permitted under TSRGD 2014? | |
| 4.2.20 | Recommended use of raised table and markings is not clear. | Diagrams and linked photographs required |
| 4.2.22 | We note Dutch use of mixed zebra(on cycle track) and signal (on carriageway) .<br><br>Use of zebras on cycle tracks should be trialled (e.g Stratford High Street) | |
| P 146 fig 4.7 item 1 | If an island is to be used as a cycle refuge a suitable width width should be specified (e.g. 2m). The island on south side of Tower Bridge with its tiny gap is a notable hazard. Vehicle flows and alternatives must be considered when installing such facilities. | |
| 4.3.6 | Narrow islands with informal functions must not be considered satisfactory solutions to the crossing of main roads by cycle routes (e.g. Green Lanes/Mount Grove Road on Olympic Cycle Route) | |

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| 4.3.12 | Continuing footway and cycle track treatments across side streets is also common in Amsterdam. This should become the norm for minor junctions on busy cycle routes | |
| P 156 fig 4.9 | Options for the ‘hold left turn' layout needs prominence and to be availble at major junctions on quietways. Additionally a cycle scramble/all green phase for bikes should be included | |
| 4.4.2 - 4 | Traffic signalling schemes and timings should be set to encourage more cycling as a Mayoral policy priority. This is in accordance with DfT guidance for the Traffic Management Act.<br>120 seconds is far too high. Delays over 60 seconds should avoided and delays must not exceed motor traffic travelling in the same direction | |
| 4.4.6 | Signal countdowns are not mentioned. Dutch style count downs to next green can assist compliance. Green waves for cyclists are used in Denmark | |
| 4.4.15 | Section on separate signalling for cyclists. This section includes several welcome additions to the options available to designers and engineers. Given the commitment to continental best practice, and the lack of UK examples, the section needs to be expanded in terms of detail (diagrams, links, measurements, photos) and range of options. Solutions for junctions in particular need to be fully covered. | |
| 4.4.20 | Hold left turn needs a diagram with dimensions and also explain how left turning cyclists can bypass the signals and, when they do, the interaction with the pedestrian crossing across the road on the left. e.g. might the cycle lane have zebra markings across it? Or might there be a low level red signal to make cyclists wait? | |
| 4.4.21 | Contrary to the statement that the cycle gate ‘ | |

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| | is not to be confused with early start' this appears to be what TfL described as early start at Bow where the scheme has proved confusing for motorists and cyclists. It is not suitable for use at such junctions. Cycle gate layouts need careful consideration so cyclists can clear points of potential conflict before motor traffic. It is not suitable for junctions with 'high speed' geometry.. | |
| 4.4.24 | Signalling with dedicated cycle phases should be the default on major cycle routes with left turning motor traffic | |
| 4.4.26 | All urban junctions should be re-designed as safe places where, if conflict occurs, it happens at low speed with low risk of injury. | |
| 4.4.27 | | Insert 'problem' after particular. |
| 4.4.28 | On such high speed roads shouldn't separation in time or space be in place | |
| 4.4.29 | Unclear explanation of what is acknowledged as a poor solution | |
| 4.4.30 | Use of lane markings to remove a point of conflict merits a clearer separate explanation (also linked to 4.4.50. For example<br><br>1. without cycle lane before the lead up to the junction where cyclists just move over to the central lead-in lane.<br>2. when there is cycle lane before the junction, use a 'mixing lane' | |
| 4.4.33 | When will the concept sketch be considered for a trial? | |
| 4.4.36 - 39 | Better photographs and links to online videos of continental best practice would assist this section 'Informal' solutions must not be used as examples of good practice.<br>As noted elsewhere – all green cycle scramble | |

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| | phases need to be included. | |
| 4.4.40 picture 2 | The exit on this facility is very poor bringing buses into conflict with cyclists – use another illustration. By-passes must never lead to a conflict point with motor traffic | |
| 4.4.42-43 | Lanes through junctions should be aligned to support 'primary position' cycling through the junction.<br><br>It needs to be recognised that in Denmark and the Netherlands law and practice gives traffic going forward, including cyclists and pedestrians, absolute priority over turning traffic. Copying Danish layouts without ensuring priority over turning traffic increases risk of collision. | |
| 4.4.44 | ASLs only provide limited protection to cyclists arriving just before or at green signal. They are a second order/interim solution unsuitable for busy junctions and should be combined with speed reduction measures. | |
| 4.4.45 fig 4.10 | "Coloured surfacing:<br>TfL ought to be taking a lead in getting the London cycle infrastructure uniform, not a patchwork of colour schemes depending on the tastes of the planners in different boroughs! Drivers are much more likely to respect a uniform system.<br><br>Section 4.4.45 and 4.4.46<br>The wording on mandatory versus advisory feeder lanes needs to be stronger. E.g.:<br>"Feeders should be mandatory wherever the carriageway width (to the separating island) is 5m or more. "<br>This is intended to prioritise cycle access to a junction over multiple motor vehicle stacking lanes. | |
| P 168 | The illustrations are not best practice solutions | |
| P 169 | ASLs must not be used as ‘token’ provision for cyclists where higher order solutions are required. Unless they are enforced they serve | |

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| | no purpose. | |
| 4.4.50 | Central feeder lanes should only be used where motor vehicle speeds are effectively limited. | |
| 4.5.1 | The comment above (4.0) about calming junctions applies to all roundabouts in urban areas<br><br>Dutch mixed use roundabouts do not use UK style high speed geometries. | Add : At many UK roundabouts |
| 4.5.3 | Reduce exit geometry | Add bullet : reduce the number of exit lanes to one only at each exit |
| 4.5.6 | Early start has proven to be a poor solution at large roundabouts. | |
| 4.5.7 | Separation at the junction should not reduce continuity if the junction links two cycle tracks.<br><br>Separation or signalisation need to be considered at far lower motor vehicle volumes than specified.<br><br>Dutch practice is to install well designed subways or bridges at major junctions – These are not considered in LCDS but they may have particular relevance in outer London. | |
| 4.5.8 | Multiple exit lanes create a particular left hook danger for straight on movements | Add: width of entry, exit and circulatory lanes |
| 4.5.26 | | Delete: ‘however, gyratory removal should not be an end in itself. ‘ |

**Chapter 5 Cycle-friendly design**

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| 5.1 | This section is weak on the need to design safe junctions. Most collisions occur at junctions. A junction assessment tool that facilitates cycle safe junctions should be given equal weight to the CloS assessment. | |
| 5.1.3 | Directness – Offering shorter routes for cycle journeys than for cars encourages modal shift | |
| 5.1.6 fig 5.2 | Area wide improvements:<br>Use of streets with restricted access must not undermine the principle of direct and safe routes<br><br>Anything that is not a route for motor vehicles will get pedestrians on it unless cycle traffic is very high. (See Sustrans research). In these common circumstances, sharing the whole area with pedestrians causes less conflict than attempting to segregate, so is not a last resort for Quietways. | Change managing traffic to reducing traffic |
| 5.2.7 | Specify zero up stands within 6mm installation tolerance. | |
| P 193 fig 5.3 | Has a cycle audit to accompany LCDS been considered ? | |
| P 195 fig 5.4 | Add “point no entries with cycle exemption”, these prevent through motor traffic in one direction only, and are often a lighter touch alternative to making a road one way with cycle exemption. Driver speeds are likely to be lower than in a one-way street because drivers expect motor vehicles the other way. This may come under bans and turning restrictions, but needs to be made clearer if so. | |
| 5.3.2 | | Delete ‘wherever possible’ |
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| 5.3.8 | Some roads in the Olympic park are an | |

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| | example despite a 20 mph speed limit. | |
| 5.3.10 | All calming, including psychological calming should aim to minimise speed differential between cyclists and motor traffic. The use of sections of rough surfacing is hostile to cycling and is likely to increase speed differences. Calming may need to be re-enforced by no overtaking cyclists signs where required (cf. cycle streets) | |
| 5.3.10-11 | Illustrative layouts 5/01a and b:<br>Too small to read dimensions, which are crucial.<br>Illustrative layout 5/02:<br>Again too narrow to see details. But the street looks too narrow for this layout. Cyclists need 1 metre space from parked car doors to be safe. Overtaking drivers should leave another metre clear, but in this layout they might well think staying out of both cycle lanes is enough, as the layout strongly suggests. | |
| 5.4 | This section is far from complete. There is no useful guidance on horizontal traffic calming. Very many attempts at horizontal traffic calming put cyclists at risk of collision at the entry or exit or both.<br>This section must be complimented by diagrams and dimensions . Incorrectly implemented traffic calming is too common.<br>All calming should aim to minimise speed differential between cyclists and motor traffic. | Develop coherent guidance of traffic calming techniques that do not put cyclists at risk. |
| 5.4.2 | Calming on any street needs to be designed to accommodate cyclists. Problem features must be avoided on all roads used by cyclists not just designated routes | |
| 5.4.3 | Unlike LCDS 2005 this section is less prescriptive – this could lead to implementation of poor solutions unless monitored<br>Box reference to figure 4.6 appears to be an error. | |

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| 5.4.4 | Only sinusoidal profile humps and ramps can reduce the differneetial speed between cyclists and motor traffic. They should be mandatory for all but the shallowest ramps.<br><br>Mixed or rough surfacing on ramps forces cycles to slow more than motor traffic and should be avoided. | Re-write to prescribe sinusoidal profiles for all vertical calming. |
| 5.4.7 – 5.4.8 | Combine points and provide clearer guidance. Ill considered use of cushions is too common , they should be avoided on cycle routes. Ramp profiles on cushions should at least match standard set out above for humps. | |
| 5.4.10 - 11 | Block paving, granite sets or similar material should never be used on humps or ramps. These areas are subject to shock loading by heavy vehicles and also to un-even settling causing surface hazards to cyclists. | Delete these sections and images. |
| 5.5.3 | Simple stickers (as on Sustrans NCN routes) on existing posts can prove much more durable than easily moved metal signs. | Add bullet – installing vandal – proof signage |
| 5.5.10 | Provide guidance on maximum speeds | |
| P 211 | Incorrect numbering | |
| 5.6.1 | Bicycles are vehicles, yet they are human powered vehicles and the potential for conflict between cyclists and pedestrians is far lower than the potential for conflict between motor vehicles and pedestrians and between motor vehicles and cyclists.<br><br>Under English law pedestrians have right of passage on all sections of the highway. In effect any highway space designed for use by cycles is also used by pedestrians. It is de-facto shared space and should be designed with that in mind | |
| 5.6.2 | Cities representing international best practice for cycling rely on separate provision for cycles on major routes. Their networks, however, rely on a myriad of unsignalised junctions where cyclist and pedestrian paths cross, sharing road space. This is also a common feature of | This section needs to be re-written to reflect actual and expected levels of sharing required for an effective |

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| | signalised junctions where shared areas are used to facilitate traffic light by-passes and waiting areas for difficult turns.<br><br>In many of these cities there are formal and enforceable rules of priority at junctions, generally observed equally by cyclists and pedestrians. In Britain these rules are not enforced and not understood.<br><br>Where shared space is inevitable designers need to ensure speeds are low and priorities are made clear.<br><br>Separation of cyclists and pedestrians on tracks away from motor traffic tends to increase conflict by encouraging higher speeds without clear rules or priorities.<br><br>On arterial roads cycle flows may be high and shared use inappropriate. | network of walking and cycling routes. |
| 5.6.3 | In London it should be expected to re-allocate road space away from motor traffic as walking and cycling generally make more efficient use of that space for moving people. | |
| 5.6.8 | In the Netherlands it is common to see wheelchair users in cycle tracks and other facilities . It is also notable that there are cyclists with disabilities including those who rely on cycles for their transport needs. | |
| 5.6.18 | Is the right photo of a permitted sign | |
| 5.6.20 | first photo (top left):<br><br>It's a little hard to tell, but this looks like corduroy paving, which is a hazard to cyclists if laid parallel to the direction of travel, and is meant to be laid transversely on footways to warn pedestrians of hazards. Tramline and ladder paving has flat-topped bars, more widely spaced, and is usually OK to cycle over. It's a common but potentially dangerous mistake to lay the wrong paving, and this guide should show the correct type. | |
| 5.6.22 left | This illustrates bad practice – the 'verge' for cycle track to oncoming traffic is the with of a | |

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| photo | kerbstone | |
| 5.6.31 | Experience in the UK indicates that some markings are required to indicate shared use is permitted thus preventing disputes. | |
| 5.7.1 | LCC policy on cycles in bus lanes is published on the LCC website . Where bus flows are above 2000 pcu per day or speeds above 20 mph either speeds and flows must be reduced or separate provision for cycle users provided.<br><br>The text of this section does not make a clear distinction between sharing a route alignment and sharing road space.. - see suggested revision:- | There may be a desire to prioritise both buses and cycling on the same street, particularly for street types that are commonly used for bus routes, such as connectors, high streets and high roads.<br><br>Combining bus and cycle provision can involve different types of solution, from segregating both modes to sharing. On the prestige and priority cycle network the should be a presumption against sharing with buses, as research shows that users find this substantially less attractive than segregation. Advice in this section on bus stops is relevant to situations where cycling is provide for off-carriageway. Guidance on |

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| | | shared bus/cycle lanes can be found in section 3.3 |
| 5.7.6 | Bus lanes need to be 4.5m wide to permit safe overtaking of cyclists within the lane. | |
| 5.7.8 | This only works if cyclists are off-carriageway. If they re-enter the carriageway immediately after the bus stop, they are likely to come into conflict with a bus starting off, whereas if they pass the stopped bus on the right, it is clear that the bus must wait until they have passed.<br><br>Illustrative layout 5/04: is NOT SAFE for the reason stated above. This layout should be deleted from the guidance. | |
| 5.7.10 | TfL should apply to trail zebras across cycle tracks at floating bus stops – e.g. at Stratford High St | |
| 5.8.5 | Inset bays can represent a 'dooring' danger | |
| | | |
| 5.8.21 | Agree with note on cycle peaks | Delete 'wherever possible' in first sentence. |
| 5.8.24 | Has research on cycle symbols directing positioning been carried out ? Ref? | |
| 5.8.27 | The tapers should not be included in the safe overtaking space. A slow cyclist can probably be overtaken in 20m, though a fast one will need more distance. So 20m plus the two tapers = 50m should be the minimum gap where it's worth taking the cycle lane back to the kerb. | |

**Chapter 6 Signs and Markings**

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| 6.1 | We welcome the commitment to develop comprehensive signing guidance for Quietways. Off-route signing is at least as important as on-route. If a route is the best way between two places, even if it doesn't reach either, cyclists need to be able to find it. This is also a useful promotional tool, both for new routes and for cycling in general. | |
| 6.1.11 | We welcome this step | |
| 6.1.13 | Highlighting 'except cycles ' on no through routes is an effective way of indicating potentially convenient cycle routes | |
| 6.2.2 | Direction signs that have been rotated need fixing so that they can't be. | |
| 6.2.6 Box | Consistency assist with compliance and enforcement . TfL must lead on consistent use of signage in London, | |
| P 253 fig 6.3 | Maintenance of road markings ,which wear way, is vital | Missing d on provide |
| 6.2.10 | All bollards on cycle routes must have tamper-proof reflective stripes or signs | |
| 6.2.12 | Many London cycle direction signs have been vandalised. Low cost stick on signs , as used on Sustrans NCN routes, should be used where appropriate. | |
| 6.3.12 | Is there a legal reason why yellow boxes cannot be used prevent obstruction of cycle routes (e.g.. City Road, Islington) | |
| 6.3.13 | Do these markings have any legal status in the UK ? | |
| 6.3.22 | London-wide (and national) consistency in colouring would assist with compliance . TfL should take a lead. | |
| 6.4,3 – 6.4.4 | Not essential | |
| 6.4.24 – | The guidance in these sections shows no consideration of the principles set out in | Re-write these |

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| 6.4.30 | section 3.1 on lane width and cyclist positioning.<br><br>The illustration by 6.4.26 shows a symbol too close to a parked car.<br><br>The Prevention of Future Death's report from the Senior Coroner for Inner North London highlighted the potential for confusion from poorly positioned signage. This section needs to be re-considered with full consultation and advice from cycle training representatives. | sections |
| 6.5 | This section must be updated to match the provisions of the revised TRSGD and the more relaxed regulatory framework.<br><br>The fuller schedule of cycling signs and markings in one section included in the 2005 edition of LCDS was more useful – it provided an easy visual reference to all signs mentioned in the document. All signs and markings referred to in LCDS should be included in this chapter<br><br>Parking reserved for adapted cycle/ user with disability should be trialled – it can be used on the outer bike stand in a group of stands | |
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## Chapter 7 Construction

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| 7.1.10 | We share the view that the ride quality and smoothness of cycle tracks must match or exceed that of the adjacent road | |
| 7.1.15 | Maintenance and re-instatement , to match the original standard and colour are essential. | |
| 7.1.21 | “Minor upstands” is too vague. Upstands should not be used as speed control as they seriously degrade the usability of a route for cyclists of any speed.<br><br>Upstands required for drainage which are parallel to travel should never exceed 10mm (to prevent crashes). Ones at right angles should never exceed 15mm (to prevent wheel damage with narrow tyres).<br><br>Tolerance of =/- 6mm must be enforced during snagging | Remove reference to upstands being used for speed control..<br><br>Figure 7.2:<br><br>Any sort of block paving should not be used for long distances where cycle speeds are expected to be high, because of the vibration it produces. |
| 7.2.5 | Wider paths need to be designed where loss of width due to overgrowing is likely | |
| 7.2.6 | Loose gravel or similar is never acceptable for cycle routes. If deep it’s impossible to cycle on, and even if shallow skid resistance is low, and it badly affects steering. Hoggin usually binds enough to be acceptable | |
| 7.3.10 | Corduroy in line with cycle tracks can cause slippage and unseat riders . See 7.3.21 | |
| 7.3.18 | It is quite common for corduroy paving to be installed in error instead of tramline paving. This should always be checked, as this paving is much more prone to deflect wheels and cause skids. | Add bullet point |
| 7.4 | Maintenance is essential with cycle routes prioritised for clearing of ice and snow | Add snow and ice clearance as sp |

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| | The cycling community is willing and able to identify road faults and maintenance issues. Highway authorities should make use of aps that can supply such information. | 7.4.2 |
| P 303 | Some duplication | |
| 7.5.4 | Always consider the trade-off between distance and gradient in ramps to bridges and subways. If they are on the main desire line, 1 in 20 is good. But if the ramp has to be folded back on itself, it's effectively a detour, and a shorter, steeper ramp will provide better service. At 1 in 20, the ramp length to get over a road is at least 100 metres each side. In general, 1 in 12 with flat landings every 10-15 metres should be fine for cycling – and for wheelchairs, though the guidance says different. But saving 80 metres is worth a steeper gradient. | |
| 7.5.5 | Too many poor ramps have been installed. Diagrams and details should be provided with links to good practice photos (Olympic Park (though one sided only) Regent's Canal.) . Ramps on designated cycle routes should be provided on both sides unless restricted. | |
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**Chapter 8 Cycle parking**

| Paragraph or page | Comment | Suggested text change |
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| 8.1.1 Box | Strongly agree – it is up to boroughs to ensure, through planning process, that all new developments meet or exceed the forthcoming standards for parking in the London Plan 2014 | |
| 8.1.5 | The Mayor's Transport Strategy dates back to 2010 and is out-of-date. Cycling to work journeys in Hackney already exceed 15% of the population. The lack of cycle parking at home and in the workplace must not be allowed to be a barrier to cycling. | |
| 8.1.8 | Please see the LCC submission to the London Plan consultation on cycle parking. Residential parking should allow one space per resident. Spaces in work places should meet the standards proposed in the SKM report for TfL https://www.london.gov.uk/sites/default/files/Cycle%20Parking%20Standards%20Evidence%20Report%20for%20publication.pdf in order to meet future demand. | |
| 8.1.9 | Parking in residential developments , unless inside homes, should be arranged in clusters that are conveniently located and managed as 'clubs' with identified members to deter theft. | |
| 8.2.17 | The outer stand in a bank can be usefully reserved for adapted cycles, such as those used by people with disabilities or carrying children. Such spaces should be marked with a suitable sign . | |
| 8.2.21 | Cycle stands should be inspected regularly and abandoned bikes removed after a suitable warning period. | |
| 8.3.1 | Cambridge standards are supported by several London boroughs | Add reference to Cambridge Cycle Parking Standards |
| 8.3.2 Photo | The so called pennant stand does not provide sufficient stability especially for 'step-over' frames. The illustration | |

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| 3 | should be changed. | |
| 8.3.5 | See note at 8.2.17 | |
| 8.3.7 | Tube thickness must be specified | |
| 8.3.9 | Low grade two tier racks must not be used (e.g. indoor two tier racks at Westfield Stratford which offer poor access and security). Racks must meet, longevity, ease of use and security standards. | Add reference to Dutch two tier cycle parking standards. |
| 8.4.2-4 | Where stands are in a row but not at 90 degrees, the spacing must be measured perpendicular to the stands, not along the length of the row, or they will be too close together. The second diagram in section 8.4.4 is therefore wrong.<br>Stands must be 600mm from any object taller than a kerb, in any direction. | Revise drawings |
| | | |
| 8.5.3 | | Add lifts or ramps |
| 8.5.7 | Installing insufficient stands, when a greater number is needed (e.g Paddington, Ealing, Waterloo) , is not cost effective. Initial installation must exceed current demand. | |
| 8.5.10 | St Pancras is an example of poor signage externally | Add clearly signed , both inside and outside the station, and shown on station maps and websites |
| 8.5.11 | Transec requires CCTV at most stations | |
| 8.5.14 | Add bullets<br>• Allocation of space to expand parking capacity<br>• Good road access to station<br>Good signage and publicity for facility | Add bullet points |
| 8.5.15 | | Replace ‘should take |

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| | | every opportunity' by must |
| 8.5.16 | Where access permits the priority should be to provide storage inside the home. The area to be additional GIA and minimum storage space and circulation requirements | Re-arrange paragraph to emphasise internal storage options |
| 8.5.17 | See above. Parking on estates , outside flats, is best arranged in clusters run as clubs with identified members | |
| 8.5.31 | Employers should initiate a Bicycle User Group to ensure quality provision for staff | |
| 8..5.40 | | Add reference to TfL schools cycle parking programme |

**Appendix: Cyclists at roadworks**

This section is a very welcome addition but it needs to be more prescriptive.

The road and lane width advice from TAL15/99 should be re-considered. Motorists are often not deterred from un-safe overtaking by a 3m road width. When however, clear signage stating Narrow lanes. Do not overtake cyclists is provided motorists usual respect the signs and cyclists ‘take the lane’ without fear of aggression or close passing. This was very evident at works in Tooley St SE1.

Designers and auditors of road works layouts should be trained in all aspects of the Cycle Design Standards

Where narrow widths are a permanent feature e.g London Bridge, Hammersmith Bridge, permanently installed signs should instruct motorists not to overtake cyclists.