

Cyclists Touring Club right to ride network

www.ctc.org.uk www.northhertsctc.org.uk www.sustrans.org.uk



Please reply to:

Alasdair Massie Ceng MIStructE
67 Ashwell Road
Bygrave
Baldock
Herts
SG7 5DZ

alasdair_massie@LineOne.net

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Alissa Ede
Hertfordshire County Council

By email

Dear Alissa,

Hitchin Station Forecourt Redevelopment

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Thank you for meeting us earlier at Hitchin. On the whole, we felt that it was a very constructive meeting, and hope that same spirit of open and robust dialogue will be continued.

During the meeting a number of highly misleading views were expressed, and presented as fact. In truth the views presented are in direct contradiction to national and county guidelines, and to standards of good, safe design. It gives us great concern that the individuals responsible for this design appear to be either ignorant of basic principles and national guidelines on designing for cyclists, or are unwilling to follow them.

There is no excuse for this. Neither the principles nor the detail of designing for cyclists is difficult to follow. You design for cycle traffic in exactly the same way as for any other vehicular traffic except that cyclists are less demanding on space, and present little threat to other road users. All of the principal geometric requirements are defined in guidance published by government, as is the decision making process. This guidance carries exactly the same weight as guidance on the dimensions and layout of the highway for motor vehicles. It is **NOT** an optional extra that can be disregarded whenever it is inconvenient.

Designing for cyclists – basic principles

There is a very simple rule of thumb when designing for cyclists. **Design any cycle facility as though it were to take motor vehicles and then halve the dimensions.**

This simple rule will result in a perfect facility every time.

It is not difficult to understand the basis of that rule. A typical motor vehicle sits two occupants abreast (although one of those spaces is usually vacant), a bicycle sits one. All of the principles that apply to motor vehicles (need for adequate width, clearance to hazards, freedom from barriers, continuity, visibility etc) apply equally to cycle traffic. Any feature that does not belong in a road has no place on a cycle facility either.



Dutch cycle infrastructure is designed as roads

Unfortunately many British designers ignore these simple principles, rendering the “facility” unusable.

You should be able to drive a car safely down a properly designed two way cycle path at a speed of 20 mph (providing nobody comes the other way). I do not think that anybody would feel comfortable driving down the proposed pavement conversion do you ? Nor do I think that people using the footway would be happy about it either. That is because it has not been designed properly, insufficient width has been allowed, and the junction with the roadway has been tackled in the most dangerous manner possible.

Do cyclists need segregating from buses ?

We are given to believe that the “justification” for cyclists being pushed onto an unsafe and unsatisfactory pavement conversion in the current proposals is that the safety auditors believe that it is unsafe for cyclists and buses to mix.

We find this suggestion staggering. It raises some very serious questions about the experience and judgement of the individuals carrying out the design and safety audit.

Bus lanes have been with us for a very long time and cycling has always been permitted in them. They are popular with cyclists and well used. The safety and suitability of cycling in bus lanes has been studied by TRL and found to be good. Moreover, anybody approaching the railway station by bike will have to share space with buses, lorries and other traffic on the public highway before they reach the station.

If a cyclist is unable to deal with buses then they will not reach the station. It is as simple as that.

Cyclists in the UK are normally permitted to use with-flow bus lanes and other bus priority facilities because sustainable modes of transport are being encouraged and because cycling in bus lanes is usually safer than riding outside them between moving buses and general traffic.

Surveys and interviews carried out in Edinburgh, Hull, Derby and London found that riding in bus lanes (including contra-flows) was generally very popular with cyclists because it appeared safer and more direct than cycling in general traffic.

Few instances of actual conflict or delay were observed, but bus drivers and cyclists appeared to have a generally low opinion of each other, which might be addressed by ensuring sufficient bus lane width and greater mutual awareness.



TRL 610:2004 Cycling in bus lanes. S Reid, N Guthrie

Bus lanes are often located on key radial roads and provide cyclists with a direct and barrier free route into town centres. They are generally popular with cyclists and avoid the difficulties associated with parallel shared footways. Cyclists particularly value the perceived safety and reduced journey times they afford.

Bus lanes are likely to form an important part of the overall cycle network and should be publicised as such.



‘What is important in health and safety cases is that any alleged risk should be real and not just theoretical or fanciful’

Lord Justice Moses summing up his judgement in the appeal case brought by headmaster James Porter against his conviction by the Health and Safety Executive. Mr Porter had been prosecuted for the death of a schoolchild who had hit his head while pretending to be Batman.

<http://magazines.scholastic.co.uk/content/3213>

Safe design

A safe design is one that ensures road users' movements are predictable, legible and understandable, that avoids creating conflict, that does not force users to choose between safety and convenience, and ensures that any possible conflicts happen at low speed.

The current proposals do the opposite.

A safe and satisfactory design is arrived at by following the "Hierarchy of Measures" defined in TA 91/05. See below. This is clear and unambiguous. The designers of this scheme have gone straight for the LEAST suitable measure, so they should not be surprised that the users are not happy about it.

A **SAFE** design is one that tackles danger **AT SOURCE**, by reducing the volume and speed of traffic, and by improving junctions (where most injuries occur).

Consider the current proposals, and in particular the point where cyclists leave the short pavement conversion and are launched into the road. The roadway here is wide and straight, it will encourage drivers to enter the forecourt at speed. Cyclists will be emerging from the "wrong side" of the road, where drivers will not expect to meet them, straight into the path of oncoming vehicles, at a junction, close to another junction.

Taxis will be queuing across the end of the "cycle path" blocking the cyclist's way and forcing them to bump down the kerb at another point. The taxis will obscure the cyclist from view. There is a sign post planted in the path, restricting his freedom to maneuver. The cyclist will also need to negotiate a queue of traffic waiting to pull out into Walsworth Road.

With so many hazards to negotiate at this point the cyclist will not be able to focus sufficient attention on the **REAL** hazard - drivers entering the forecourt at speed. Because of the layout, vehicles coming from Cambridge Road direction are hidden from the cyclist's view until he has committed to pulling out.

In summary, the current proposals encourage an inappropriately high speed environment and then force cyclists to join the traffic at the most dangerous point in the entire site.

That none of this has been raised by the safety auditors is regrettably of little surprise to us. Safety audits are carried out by the same engineers who carry out similar poor quality designs. In our experience safety auditors rarely have much experience or appreciation of cycling issues. They tend to focus entirely on minor hazards, which are addressed by introduction of major hazards or barriers.

We are not alone in these concerns:

3.7.11 One area of concern with the existing system is that Road Safety Audits may seek to identify all possible risks without distinguishing between major and minor ones, or quantifying the probability of them taking place. There can also be a tendency for auditors to encourage designs that achieve safety by segregating vulnerable road users from road traffic. Such designs can perform poorly in terms of streetscape quality, pedestrian amenity and security and, in some circumstances, can actually reduce safety levels.

Manual for Streets DfT

<http://www.dft.gov.uk/pgr/sustainable/manforstreets/pdfmanforstreets.pdf>



We have put forward suggestions that will **REDUCE TRAFFIC SPEED** and put cyclists emerging from the parking area in a legible, predictable road position. That is safe design.

Hierarchy of measures

Why do engineers with little knowledge or experience of cycling so often think that they know better than the people who carry out the research and write the guidance ?

The hierarchy of measures to be followed is very clear and unambiguous. It is laid out in Traffic Advisory Leaflet 91/05. As you can see, pavement conversions are the measure of **LAST RESORT**. There are good reasons for this. They do nothing to create a safe road environment, force cyclists into a series of potential conflicts, and create hazards wherever they come onto a road.

A British pavement conversion should not be confused with a Dutch segregated cycle path. They are completely different facilities. The former is a footway, usually without any measures to make it suitable for cycle use and invariably too narrow. The latter is a road for exclusive use by cycles and retains priority over side road turnings.

Cycling Infrastructure Requirements		Hierarchy of Provision		<i>Source TA 91/05</i>
🚲 <i>Coherence</i>	Continuous, consistent quality, linking all origins with all destinations	🚲 <i>Traffic Reduction</i>	Particularly HGVs. Divert traffic, traffic calming, road closures.	Consider first
🚲 <i>Directness</i>	Follow desire lines without detours or delays	🚲 <i>Speed reduction</i>	20 mph zones, Homezones, shared surfaces, traffic calming	
🚲 <i>Attractiveness</i>	Well lit, good security and visibility, quiet, attractive environment	🚲 <i>Junctions and Traffic Management</i>	ASLs, signalisation, re-engineering of roundabouts, freedom from banned turns, removal of dedicated vehicle left turn slip lanes.	
🚲 <i>Safety</i>	Real and perceived	🚲 <i>Carriageway Redistribution</i>	Cycle lanes, bus lanes	Consider last
🚲 <i>Comfort</i>	Good surfaces and maintenance, no awkward manoeuvres or interruptions	🚲 <i>Off road provision away from highways</i>	Railway paths, canal towpaths, paths across parks, new cycle paths, ROWIPs	
		🚲 <i>Roadside pavement conversions</i>	Rarely satisfactory. Only appropriate for busy, fast rural roads with few side roads	

<http://www.standardsforhighways.co.uk/dmrb/vol6/section3/ta9105.pdf>

You will also find this hierarchy in Hertfordshire County Council’s Cycling Policy, p55. Why is it not being followed ?

<http://www.hertsdirect.org/infobase/docs/worddocs/cyclestrat.doc>

Follow the hierarchy. Reduce the speed and volume of traffic, and make junctions safer. Don’t put cyclists on the pavement and don’t believe designers who claim that is what should be done.



Basic geometry

Again this is all laid out for the designer, and again it is systematically ignored by many.

All the main geometrical constraints are defined in Traffic Advisory Leaflet 90/05. These are no more optional than the requirements for motorized traffic in the same document (TA 90/05 and 91/05 are part of the Design Manual for Roads and Bridges published by the Highways Agency).

For your information, the key dimensions are reproduced below.

These dimensions are **EFFECTIVE** dimensions. Just as you need 500 mm clearance to any obstacles from a roadway, you also need **500 mm clearance** to any obstacles on a cycleway, as well as 500 mm clearance to the kerb and to any posts or poles that might be placed adjacent to the carriageway. An illustration of how this works is attached. Further explanation can be found in Local Transport Note 02/04 "Adjacent and Shared Use Paths".

In a situation like your proposed pavement conversion, you would need 6.5m at least kerb to boundary, just to achieve the recommended widths. Frankly we do not believe that even this would be sufficient because of the intense pedestrian flows experienced when a train pulls in.

Clearly, the current proposals fall far short of the required level of service.

Cycle Path Basic Design Dimensions		Source TA 90/05
http://www.standardsforhighways.co.uk/dmrb/vol6/section3/ta9005.pdf		
Parameter	Recommended	Minimum – not to be used unless it is to the users clear advantage.
Width – on road cycle lane	2m	1.5m
Width – cycle track only	3m	2m
Width – shared track	5m (3.0m cyclist, 2.0m pedestrian)	3m (1.5m cyclist, 1.5m pedestrian)
Radius of curvature	25m or greater	
Tight bend radius	4m minimum	
Visibility on bends	30m	20m
Design speed	30kph min	10 kph over short distance

LTN 02/04 Table 1 - Additional Width Requirements for Footways and Cycle Tracks	
LTN 02/04 http://www.dft.gov.uk/consultations/archive/2004/ltnwc/ltn204adjacentandsharedusefa1692	
(These dimensions are added to the effective width required)	
Type of Edge Constraint	Additional Width
Flush or near-flush surface	No addition is needed
Low upstand up to 150mm high	Add 200mm
Vertical feature from 150mm to 1200mm high	Add 250mm
Vertical feature above 1200mm high	Add 500mm
Road kerb	Add 500mm (1500 preferred TA 90/05)

Cycle Contraflows

Designers rarely have concerns about the safety of vehicles sharing a road, moving in opposite directions unless one of those directions is restricted to cyclists only. Two way traffic is the norm, it is not dangerous.

Removing motorised traffic from one direction does **NOT** make it more dangerous for cyclists. On the contrary, it removes one source of hazard (rear run downs).

On the continent it is the **NORM** for cyclists to be free to ride contraflow in one way streets. It is not seen as dangerous, unreasonable or unusual. Dutch guidance requires designers to provide for contraflow cycling unless there are insuperable difficulties in doing so.



Here in the UK we have had contraflow cycle lanes for decades. They have been monitored, studied, guidelines have been written and standard details produced. Unsegregated contraflow cycling is also perfectly feasible and acceptable in the sort of low speed environment that we are aiming at.

THERE IS NOTHING UNUSUAL OR DANGEROUS ABOUT CONTRAFLOW CYCLING PROVISION. It is safe, sensible and good practice.

The introduction of one-way working can cause significant problems for cyclists if they are forced to use more circuitous and hazardous alternative routes as a result. This can be a deterrent to cycle use.

Two-way cycling should, therefore, be the default option where it is proposed to introduce one-way working for general traffic. Any decision not to provide cyclists with this facility should only be taken after a thorough examination of the proposal has shown that such an arrangement could not be made to operate safely. Since many one-way streets were originally two-way working it is likely that most could be converted to rectify this omission.

Research by the Transport Research Laboratory (TRL), has found that properly designed contraflow schemes can function satisfactorily in a variety of conditions.

Safety practitioners should note that this research found that in none of the cases studied had cyclists had been put in a position of serious conflict, and the behaviour of cyclists was not judged to have endangered pedestrians.

A well-designed scheme should not, therefore, give rise to undue safety problems. Any specific concerns identified during a safety audit should be balanced against the likely hazards faced by cyclists forced to use alternative routes if contraflow cycling is not allowed. The audit should also take into account the fact that if no contraflow facility is provided a certain proportion of cyclists will travel in the contraflow direction illegally and, therefore, at increased risk due to the lack of formal provision.

Cycling England Engineering Checklist A.06 Contraflow Cycling

<http://www.cyclingengland.co.uk/documents/A.06.pdf>

National guidelines: TA 6/98 "Contraflow Cycling"

<http://www.dft.gov.uk/pgr/roads/tpm/tal/cyclefacilities/contraflowcycling?page=1#a1000>

Yours Sincerely

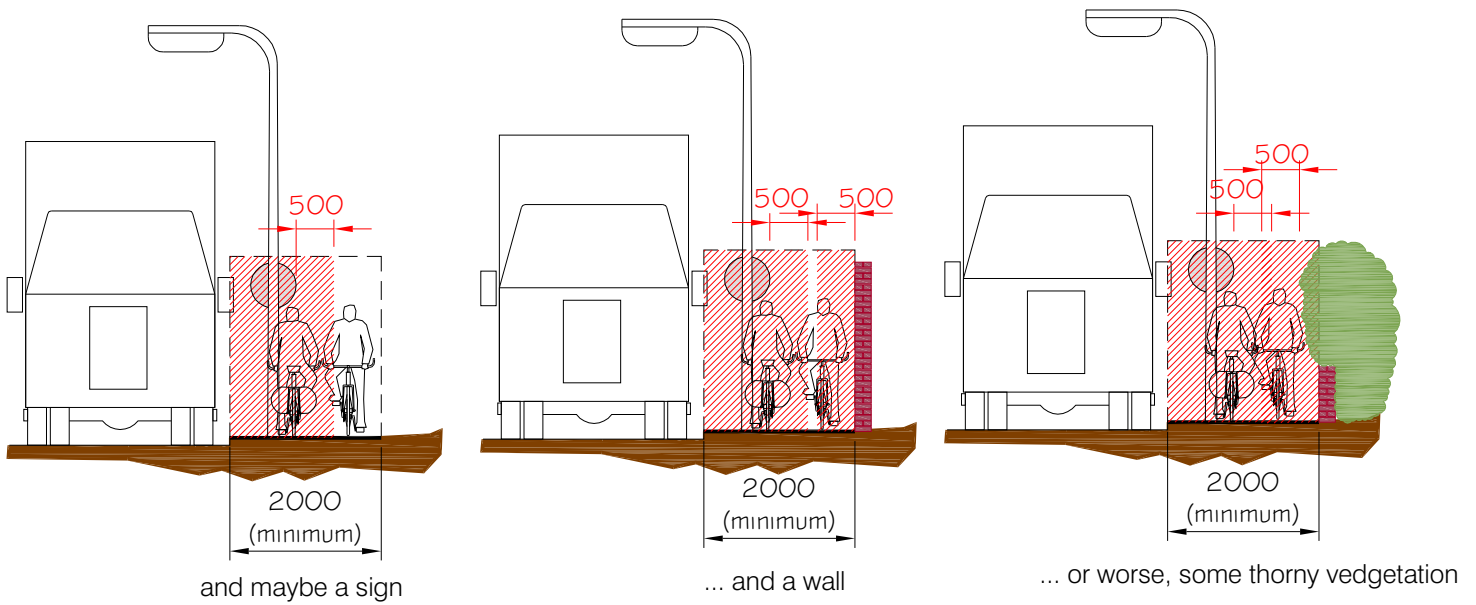
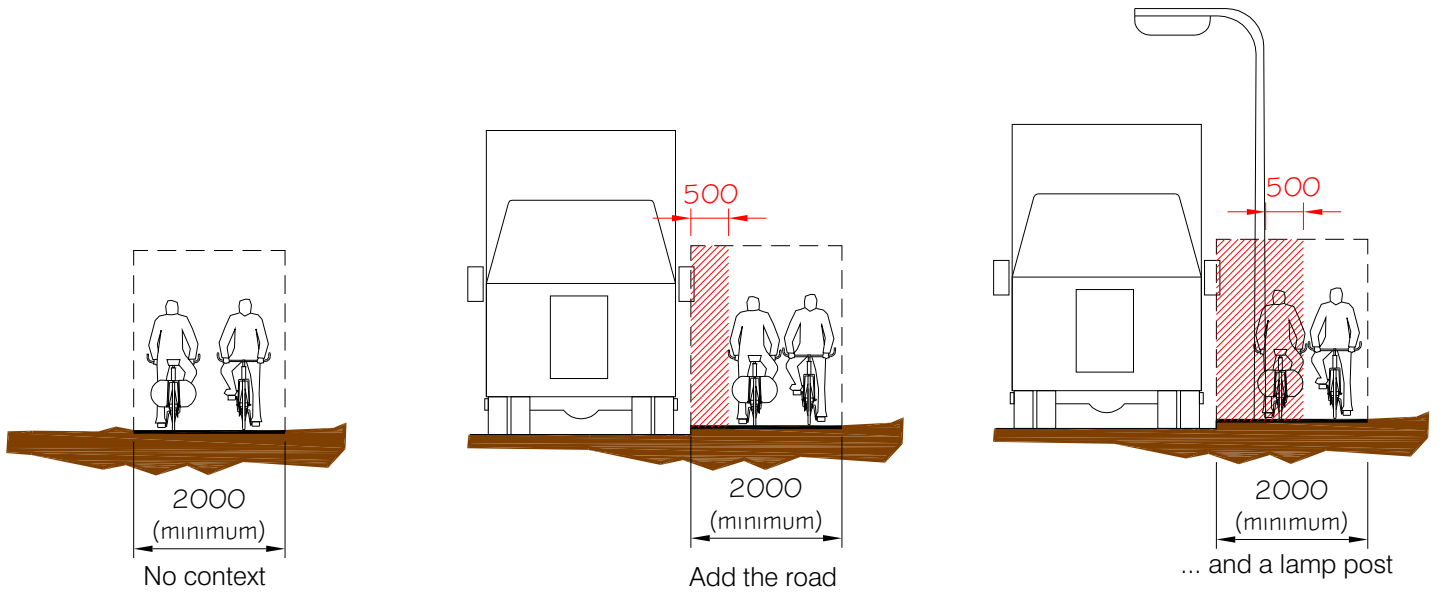
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CTC Right to Ride Representative, North Herts

Cycle Path Widths

The Importance of context

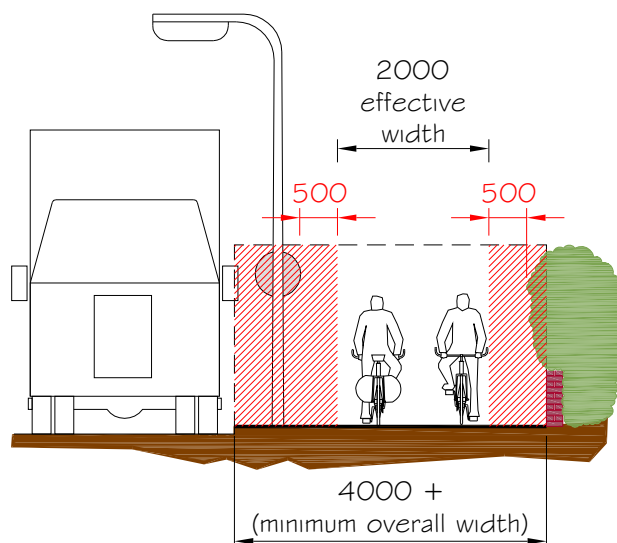


References:

LTN 02/04 "Adjacent and Shared Use Facilities for Pedestrians and Cyclists" Section 6.

TA 90/05 "Geometric Design of Pedestrian, cycle and equestrian routes". Section 7.

Note that the 2m minimum width shown is for cycle use only. 3m is the minimum width for shared use with 5m recommended.



What it should look like

