

Cycling and pedestrians

THIS BRIEFING COVERS

The low degree of risk cyclists pose to pedestrians; cycling on the pavement (footway) and red light jumping; sharing space.

HEADLINE MESSAGES

- Research shows that cyclists are perfectly able to mix harmoniously with pedestrians and, contrary to popular belief, are not a major danger to them.
- Even though, unlike driving, most cycling takes place where there are high levels of pedestrian activity, pedestrians are more likely to be killed in collision with a motor vehicle than in collision with a cycle. This includes collisions that happen on the verge or footway (pavement).

KEY FACTS

- The vast majority of pedestrians who are killed or injured in collisions are hit by a motor vehicle, not a cycle. From 2007 to 2016 (GB), *in any location* (i.e. in the road or on the footway, urban and rural):
 - Cycles were involved on average in about three pedestrian fatalities a year, and 82 serious injuries. This represents c.0.6% of pedestrian fatalities overall, and 1.5% of serious injuries.
 - Cars were involved on average in about 317 pedestrian fatalities a year, and 4,394 serious injuries. This represents around 67.5% of pedestrian fatalities, and over four fifths (81%) of pedestrian serious injuries.
 - Altogether, motor vehicles (i.e. cars, motorbikes, buses, vans, lorries etc.) were involved in 99.4% of collisions in which a pedestrian died.
- In 2016, 43 pedestrians died in collisions involving a vehicle on the *footway or verge*. None of them involved a cycle.
- From 2007-16, no pedestrians in Britain were killed by red light jumping cyclists, while around five a year were killed by red light jumping drivers.
- An official study of pedestrian priority sites in the 1990s found only one pedestrian/cyclist incident in 15 site years.





Cycling UK VIEW

- Cyclists should behave responsibly and within the law.
- Cyclists do little harm to other road users, including pedestrians.
- Unlike driving, most cycling takes place in areas of high pedestrian activity, but it poses far less risk to pedestrians than motor vehicles. This is the case even for pavement cycling and red light jumping, neither of which Cycling UK condones.
- Cyclists and pedestrians are able to interact far more harmoniously, even in crowded conditions, than is often thought.
- People who are frail or who suffer sensory or mobility impairments are often understandably reluctant to share space with cyclists. Trials, however, usually prove that cyclists very rarely put any pedestrian in a hazardous situation. Codes of practice - backed up as required by policing - are preferable solutions, rather than undermining the promotion of safe cycling for fear of the actions of a minority.

BACKGROUND INFORMATION

1. Cycling and pedestrians: risks

Cycling UK view: Cyclists do little harm to other road users, including pedestrians

N.B. The casualty figures quoted below DO NOT indicate who was to blame for the collisions

a. Numbers (see Table A)

The vast majority of pedestrians who are killed or injured in *reported*¹ collisions are hit by a motor vehicle, not a cycle. From 2007 to 2016 (GB), *in any location* (i.e. road or footway, urban and rural):

- Cycles were involved on average in about three pedestrian fatalities a year, and 82 serious injuries. This represents c.0.6% of pedestrian fatalities overall, and 1.5% of serious injuries;
- Cars were involved on average in about 317 pedestrian fatalities a year, and 4,394 serious injuries. This represents around 67.5% of pedestrian fatalities, and over four fifths (81%) of pedestrian serious injuries;
- In total, motor vehicles (i.e. car, motorbike, bus, van, HGV etc.) were involved in 99.4% of collisions in which a pedestrian died, and 98.5% of collisions in which a pedestrian was seriously injured.

b. Rate per billion vehicle miles in urban areas, excluding motorways (see Table B)

Obviously, motor vehicles account for a much greater proportion of Britain's road mileage than cycles. In 2016, for example, motor vehicles drove around 116 billion vehicle miles (BVM) altogether on urban roads (excluding motorways), compared to 2.3 billion for cycles – or fifty times as much.

Even allowing for this fifty-fold difference in the total miles travelled, from 2012-16, in *urban areas*:

- For every one BVM ridden, cycles were involved in 1.4 pedestrian fatalities, and 38.9 pedestrian serious injuries;
- For every one BVM driven, cars were involved in 1.9 pedestrian fatalities and 38.2 serious injuries;
- For every one BVM driven, motor vehicles (i.e. car, motorbike, bus, van, HGV etc.), were involved in 2.4 pedestrian fatalities and 37.8 serious injuries.

This means that, mile for mile, in urban areas, cycles were less likely than motor vehicles to be involved in a fatal collision with a pedestrian, and not much more likely to be involved in a serious injury collision with them. Again, it is important to note that, unlike motoring, most cycling happens in towns and cities, where the concentration of cyclists and pedestrians is at its most dense. It is still the case, though, that the degree of risk that cyclists pose to pedestrians is minimal and should not be exaggerated.

Table A: Numbers

Pedestrian casualties in collision with vehicles (in numbers), ALL AREAS: GB 2007-2016												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL	
Fatalities: pedestrians killed in collisions involving ...												
a	cycles	4	1	0	4	2	2	6	5	2	3	29
	cars	433	391	353	282	313	274	268	296	273	289	3172
	any MOTOR vehicle (car, motorbike, bus, van, HGV etc.)	642	571	500	401	451	418	392	441	406	445	4667
	any vehicle (motor + cycle)	646	572	500	405	453	420	398	446	408	448	4696
Percentage killed in collisions involving ...												
e	cycles	0.6	0.2	0.0	1.0	0.4	0.5	1.5	1.1	0.5	0.7	0.6
	cars	67.0	68.4	70.6	69.6	69.1	65.2	67.3	66.4	66.9	64.5	67.5
	any MOTOR vehicle (car, motorbike, bus, van, HGV etc.)	99.4	99.8	100.0	99.0	99.6	99.5	98.5	98.9	99.5	99.3	99.4
Serious injuries: pedestrians seriously injured in collisions involving ...												
	cycles	48	52	66	77	88	89	93	103	96	108	820
	cars	5064	4909	4528	4217	4428	4524	4042	4093	3983	4156	43944
	any MOTOR vehicle (car, motorbike, bus, van, HGV etc.)	6230	6018	5479	5123	5366	5470	4905	4960	4844	5032	53427
	any vehicle (motor + cycle)	6278	6070	5545	5200	5454	5559	4998	5063	4940	5140	54247
Percentage seriously injured in collisions involving ...												
	cycles	0.8	0.9	1.2	1.5	1.6	1.6	1.9	2.0	1.9	2.1	1.5
	cars	80.7	80.9	81.7	81.1	81.2	81.4	80.9	80.8	80.6	80.9	81.0
	any MOTOR vehicle (car, motorbike, bus, van, HGV etc.)	99.2	99.1	98.8	98.5	98.4	98.4	98.1	98.0	98.1	97.9	98.5
All injury collisions: pedestrians hit in collisions involving ...												
	cycles	229	261	292	341	406	432	466	498	444	460	3829
	cars	24602	23210	22016	20992	21321	20627	19525	20094	19397	18897	210681
	any MOTOR vehicle (car, motorbike, bus, van, HGV etc.)	29962	28221	26595	25504	25792	24786	23567	24250	23617	23090	255384
	any vehicle (motor + cycle)	30191	28482	26887	25845	26198	25218	24033	24748	24061	23550	259213
Percentage hit in collisions involving ...												
	cycles	0.8	0.9	1.1	1.3	1.5	1.7	1.9	2.0	1.8	2.0	1.5
	cars	81.5	81.5	81.9	81.2	81.4	81.8	81.2	81.2	80.6	80.2	81.3
	any MOTOR vehicle (car, motorbike, bus, van, HGV etc.)	99.2	99.1	98.9	98.7	98.5	98.3	98.1	98.0	98.2	98.0	98.5

B: Rate per billion miles

Pedestrian casualties in collisions with vehicles per billion vehicle miles (BVM), URBAN AREAS: GB 2012-2016							
		2012	2013	2014	2015	2016	Annual average
Fatalities: pedestrians killed per BVM in collisions involving ...							
	cycles	0.4	2.8	1.7	0.9	0.9	1.4
	cars	1.9	1.7	2.0	1.9	1.9	1.9
	any motor vehicle (car, motorbike, bus/coach, van, HGV etc.)	2.5	2.2	2.5	2.4	2.5	2.4
	any vehicle (motor + cycle)	2.4	2.2	2.5	2.4	2.4	2.4
Serious injuries: pedestrians seriously injured per BVM in collisions involving ...							
	cycles	37.4	39.7	37.8	37.3	42.3	38.9
	cars	42.1	37.4	37.6	36.8	37.3	38.2
	any motor vehicle (car, motorbike, bus/coach, van, HGV etc.)	41.8	37.2	36.9	36.4	36.9	37.8
	any vehicle (motor + cycle)	41.7	37.2	36.9	36.4	37.0	37.8
All injury collisions: pedestrians hit per BVM in collisions involving ...							
	cycles	179	200	202	193	181	191
	cars	195	185	191	184	173	185
	any motor vehicle (car, motorbike, bus/coach, van, HGV etc.)	192	183	187	181	172	183
	any vehicle (motor + cycle)	192	183	188	181	172	183
Mileage each year (billion vehicle miles)							
	Cycle BVM	2.3	2.1	2.3	2.2	2.3	2.2
	Car BVM	92.7	91.6	93.0	93.1	94.9	93.1
	All motor vehicle BVM	112.8	111.8	114.2	114.5	116.4	113.9
	All vehicle BVM	115.1	113.9	116.5	116.7	118.7	116.2

Sources for above tables:

Casualties: *Reported Road Casualties Great Britain* annual reports, Tables 23c 2007-09 & RAS 40004, 2010-16. (DfT, 2017) www.gov.uk/government/collections/road-accidents-and-safety-statistics / Road traffic: *Road Traffic Estimates Great Britain 2016*. Tables TRA0402 (pedal cycle traffic) & TRA0104 (motor traffic). (DfT, 2017). www.gov.uk/government/collections/road-traffic-statistics. Note: The usual source of reported casualty rates is RAS30018 (DfT), but Cycling UK presents its own calculations above. See explanatory note 2.



c. Number of cyclists hurt in reported collisions with pedestrians

Inevitably, in the collisions that occur between cyclists and pedestrians, cyclists can and do become casualties too:

- From 2012-2016 on average each year, in collisions between cyclists and pedestrians that may or may not have involved another vehicle too, around 18 cyclists were seriously injured and 115 slightly injured.³ (N.B. these were: i. Collisions reported to the police - not all such collisions are; ii. Collisions where a cyclist became a casualty, and a pedestrian was involved whether injured or not).
- Over the same period, in *single* vehicle collisions with pedestrians (i.e. where no other vehicle was involved, and where a pedestrian was hurt), c.29% of cyclists were injured, 4% of them seriously.⁴
- In 2014, one cyclist was killed in collision with a pedestrian.

2. Cycling on the footway (pavement) and red light jumping

Cycling UK view: Unlike driving, most cycling takes place in areas of high pedestrian activity, but it poses far less risk to pedestrians than motor vehicles. This is the case even for pavement cycling and red light jumping, neither of which Cycling UK condones.

a. Footway/verge

- **Very few pedestrians are hurt by cycles on the footway/verge:** in Great Britain from 2007 to 2016, cycles were involved in 0.4 pedestrian fatalities on the footway/verge on average a year, and about 19 serious pedestrian injuries. No pedestrians were killed in collision with a cycle on the footway/verge in 2007, 2009, 2011-2013 inclusive, in 2015 or 2016.⁵
- **The vast majority of vehicle-related pedestrian injuries on the footway/verge involve a motor vehicle, not a cycle:** in 2016, 43 pedestrians died in collisions involving a vehicle on the footway or verge. None of them involved a cycle.⁶

Note:

Footways are not footpaths! 'Footways' (pavements) are *not* the same as 'footpaths' and their legal status differs. A footway runs alongside the carriageway; a footpath is located away from it.

Converting footways to shared use: highway authorities, of course, may convert footways into shared-use facilities. Signs and markings should make this clear (see 'Sharing Space' below).

b. Red light jumping

- **From 2007-16, no pedestrians in Britain were killed by red light jumping cyclists,** while around five a year (50 in total) were killed by red light jumping motorcyclists, and the drivers of cars, buses/coaches, taxis, vans and HGVs.
- For pedestrians hit by red light jumping vehicles, just 7.6% of those slightly injured, and 5.4% of those seriously injured, involved cyclists. The other 92%-95% involved motor vehicles.⁷
- These percentages are higher in London, where the mix of pedestrians, cyclists and traffic lights is particularly dense. There, 16% of pedestrians injured or seriously injured by red light jumping involved cyclists; the other 84% involved red light jumping by drivers/riders of motor vehicles.⁸

See Cycling UK's campaigns briefing on *Cyclists' behaviour and the law* for more detail on pedestrian casualties on the footway/verge and as a result of red light jumping:

www.cyclinguk.org/campaigning/views-and-briefings/cyclists-behaviour-and-law

- For more on cycling offences and their safety impacts on pedestrians, see:
www.cyclinguk.org/campaigning/views-and-briefings/cyclists-behaviour-and-law
- For more on public footpaths, see:
www.cyclinguk.org/campaigning/views-and-briefings/public-footpaths-england-wales



3. Sharing space

Cycling UK view:

- Cyclists and pedestrians are able to interact far more harmoniously, even in crowded conditions, than is often thought.
- People who are frail or who suffer sensory or mobility impairments are often understandably reluctant to share space with cyclists. Trials, however, usually prove that cyclists very rarely put any pedestrian in a hazardous situation. Codes of practice - backed up as required by policing - are preferable solutions, rather than undermining the promotion of safe cycling for fear of the actions of a minority.

Cycling UK believes that pavements should be for pedestrians, and that safe cycling conditions on the carriageway itself should be engineered either through low traffic volumes and speeds, or else by providing high quality, dedicated space for cycling, free of conflict with pedestrians. Indeed, reducing the volume and/or speeds of motor traffic is the most effective way of tackling the sources of danger to both pedestrians and cyclists, and also helps encourage people to travel actively.

However, when a council decides to allow cyclists to share space with pedestrians, it is important not to assume automatically that conflict will be a problem or, in fact, happen at all. Surveys show that 'perceived' conflict is often much worse than 'real' conflict.⁹ They also show that the majority of pedestrians are not especially concerned about sharing with cyclists - those who do raise strong objections are very much a minority voice.¹⁰ This has been well-established by research in the context of pedestrian-priority areas (see below).

a. Shared use paths

While converting *footpaths* to shared use often provides cyclists with useful links (see 'Parks, canals & footpaths' below), converting busy pavements (i.e. footways) should only be considered as a last resort. It is never an ideal solution and, in urban streets, it is usually the wrong one. In some situations though, this may be the best approach available, e.g. alongside inter-urban trunk roads where both pedestrian and cyclist flows are light.

Thus, it is local circumstances that should inform and dictate decisions about whether or not to convert a pavement to shared use. We recommend considering the following:

- **Pedestrian and cyclist flows:** for example, these are often light along inter-urban roads, where an off-road facility is likely to be especially beneficial for cyclists.
- **Priority:** to avoid hazards/loss of priority to cyclists, there should be few, if any, side turnings. Junctions are hazardous places for cyclists: around three quarters of road crashes happen at or within 20 metres of them.¹¹
- **The on-road alternative:** if conditions along the carriageway are dangerous and unpleasant for cycling *and cannot be improved*, or if there are no other alternatives, a shared route alongside may be the best solution.
- **Decent width, sightlines, surface quality and ongoing maintenance:** these factors are crucial design criteria for all off-road paths. If it is impossible to provide them, the on-road alternative may still prove preferable for cycling.





Segregation: confining cycles to one side of a shared path, and pedestrians to another is not necessarily helpful:

- Whilst blind and partially-sighted users may value 'harder' forms of segregation (e.g. height differences or physical barriers), these hamper movement onto, across or away from the path by others. This affects not only cyclists, but wheel-chair users too.
- Segregating narrow paths can make it difficult for users to keep to their 'own' side, creating conflict that would not arise on an unsegregated facility. Without segregation, users become more reliant on eye contact etc. - a good way of interacting safely.
- Having their own section may also encourage cyclists to ride faster and make them less likely to modify their behaviour naturally for their own and others' safety.
- Tactile lines and markings used to demarcate segregation can be hazardous to cyclists especially around corners, and all the more so in wet weather when they may be slippery.

Installing 'hard' forms of segregation between cyclists and pedestrians is therefore best reserved for situations where:

- (a) There is sufficient width; and
- (b) Movement patterns are mostly (if not wholly) linear, i.e. where there are few or no reasons for people to want to join, cross or leave the path.

If there is good reason to segregate a path, a raised white line that can be detected by blind or partially-sighted users may be as safe as 'harder' (though perhaps more reassuring) forms. It is certainly a better way to reconcile the needs of different disabled groups, as well as cyclists.

Cyclists' safety (e.g. skidding on a slippery and/or raised surface) should be considered very carefully before introducing any physical feature/marking to segregate users. For example, any tactile lines or tactile paving should be set back from junctions where cyclists are likely to be cornering.

Width: shared use tracks should be at least three metres wide, although sometimes this might be not be enough (e.g. if very large and concentrated flows of pedestrians are expected at times).

Narrower widths may be acceptable, but as long as the overall flow is likely to be relatively light, and/or only necessary for short sections. In these cases, good design solutions can help overcome or minimise any inconvenience to pedestrians, e.g. with surface materials, and signing to reinforce the message that the space is primarily for pedestrians and that 'leisurely-paced' cycling is called for.

b. Town centres with pedestrian priority/vehicle restricted areas (VRAs)

Car-free zones, or areas where motor vehicles are restricted at certain times of the day are now common in many town and city centres (e.g. for shopping streets). There are aesthetic, environmental, safety and commercial benefits for doing this, and exempting cycles from prohibitions is unlikely to undermine them.

- **Time restrictions:** decisions on if and when to ban cycling should be based on pedestrian density. Dutch guidance suggests that sharing is possible at times when the street does not attract more than 200 pedestrians an hour, per metre of available profile width:¹²

Possibility for combining bicycle and pedestrian traffic	
Number of pedestrians per hour per metre of profile width	Recommended solution
< 100	Full combination
100 - 160	Separation; traffic path with continuous profile (no difference in height)
160 - 200	Separation; traffic path with sectional profile
> 200	No combination possible

Every effort should be made to keep the route open for cyclists when it is most useful to them, e.g. at commuting/school run times. It may be, in fact, that peaks of pedestrian traffic do not in any case coincide with peaks of cycle traffic (see Croydon case study below), particularly if it's a shopping street.

- **Trials:** a trial period can help alleviate any local concerns. This can be done through an experimental traffic regulation order (TRO) that permits cycling temporarily, and allows the arrangement to be monitored.
- **Road markings:** markings on the road surface (e.g. cycle logos) will help alert pedestrians to the presence of cycles.

CASE STUDY: LONDON BOROUGH OF CROYDON

In April 2016, Croydon councillors agreed to give cyclists permanent, all-day access to a busy pedestrianised shopping street in the borough. Having looked at the results of a CCTV-based survey during the 18-month trial, the council concluded that:

“Cyclist behaviour was very good. It became clear that cyclists modified their manner of riding depending on the density of pedestrians.

Light pedestrian traffic - cyclists rode at a reasonable speed and always kept a sensible distance from pedestrians.

Moderate – Cyclists rode at walking pace behind pedestrians, waiting patiently until there was a place to overtake.

Heavy – Cyclists got off and pushed their bikes.

It was clear that cyclists made all of the speed and directional changes. Pedestrians were not required to take any avoiding action.”

A follow-up camera survey also found that: *“Pedestrian and cyclists have different movement patterns through the day and different peak periods. This reduces the overlap of the two transport modes and therefore any potential for conflict.”[...] “No conflicts between pedestrians and cyclists were observed.”*

Measures to mitigate concerns from groups representing people with impaired vision and the elderly include creating an alternative two-way route that cyclists can opt to use at busy times; providing ‘comfort space’ for pedestrians; advisory signage saying: ‘Cyclists please keep towards the centre of the street’; ‘Cycle with care’; ‘Pedestrians have priority’; indicating a 10mph limit; and events to encourage considerate behaviour and promote cycling to people of all abilities.

For more, see [report](#) to Croydon’s Traffic Management Advisory Committee, 26 April 2016.

“It can be contentious to reintroduce cycling into vehicle restricted areas (VRAs) but, as these areas are often prime destinations where shops and services are located, good cycle access is desirable. Where new vehicular restrictions are to be introduced, serious consideration should always be given to retaining cycle access. Traffic conditions on unrestricted routes may be unattractive to cyclists, and the routes can be indirect. Maintaining formal cycle access needs to be considered against the likelihood of cyclists using the VRA regardless of any restrictions.”
Cycle Infrastructure Design, DfT, 2008.

www.gov.uk/government/publications/cycle-infrastructure-design-ltn-208



A Traffic Advisory Leaflet (TAL) published by the Department of Transport in 1993, summarised research from the Transport Research Laboratory on cycling in pedestrian areas.¹³ It said that:

- Observation revealed no real factors to justify excluding cyclists from pedestrianised areas, suggesting that cycling could be more widely permitted without detriment to pedestrians.
- A wide variety of regulatory and design solutions exist to enable space to be used safely and effectively in pedestrianised areas.
- Pedestrians change their behaviour in the presence of motor vehicles, but not in response to cyclists.
- Cyclists respond to pedestrian density, modifying their speed, dismounting and taking other avoiding action where necessary.
- Collisions between pedestrians and cyclists were very rarely generated in pedestrianised areas (only one pedestrian/cyclist incident in 15 site years) in the locations studied.
- Where there are appreciable flows of pedestrians or cyclists, encouragement to cyclists to follow a defined path aids orientation and assists effective movements in the area. At lower flows, both users mingle readily.

For further advice on VRA design, see:

- *Vehicle Restricted Areas* (Cycling England)
www.ciltuk.org.uk/Portals/0/Documents/The%20Hub/Design%20Toolkit/A07_Design_portfolio_vehicle_restricted_areas.pdf
- *Cycle Infrastructure Design* (DfT, 2008), section 4.3
- www.gov.uk/government/publications/cycle-infrastructure-design-ltn-208

c. Parks, canals, promenades and footpaths

Allowing cycling in parks, alongside canals, and on promenades and converted footpaths helps enhance the network of motor-traffic free routes and often provides useful links in utility journeys (e.g. going to the shops, work or school).

Again, some people object to shared use in these settings because of concerns about the impact on walkers. Yet research carried out by the Countryside Agency suggests that conflict between non-motorised users on off-road routes is more perceived than real, and often 'talked up' after the event.¹⁴

As in the case of all shared facilities, design criteria should cover: width, sightlines and user flow. Design improvements can help minimise potential conflict (by, for example, providing surfaces to instil a greater sense of the need for leisurely speeds), as can codes of conduct and enforcement against people who persist in riding in a manner that intimidates or endangers pedestrians. The surface of off-road routes like these may need upgrading to make sure that cyclists can use them.

For more on surfacing see:

- *Surfaces* (Cycling England)
www.ciltuk.org.uk/Portals/0/Documents/The%20Hub/Design%20Toolkit/C02_Design_portfolio_surfaces.pdf
- *Cycle Infrastructure Design* (DfT, 2008), section 8.8
www.gov.uk/government/publications/cycle-infrastructure-design-ltn-208

- For more on towpaths, riversides, and promenades, see our off-road access briefings at:
www.cyclinguk.org/campaigning/views-and-briefings

FURTHER READING

- Cycling UK's briefings (www.cyclinguk.org/campaignsbriefings)
 - Cyclists' behaviour and the law
 - Public footpaths
 - Towpaths and canals
 - Seaside cycling: the coast, promenades and sea-fronts
 - Cycle-friendly design and planning: Overview
- DfT. *Shared use routes for pedestrians and cyclists* (Local Transport Note 1/12). Sept. 2012. <https://www.gov.uk/government/publications/shared-use>
- Sustrans: *Cycling code of conduct on shared use paths*. www.sustrans.org.uk/change-your-travel/get-cycling/cycling-code-conduct-shared-use-paths



¹ **Under-reporting:** It is clear that DfT's statistics on injuries due to pedestrian/cyclist collisions do not provide the full picture. Although DfT's definition of 'serious injuries' is supposed to include hospital admissions, there is a significant mismatch between the police-recorded number of serious pedestrian injuries due to cycle collisions (as reported in DfT's statistics) and the number of hospital admissions recorded in Hospital Episode Statistics (HES). There are several reasons why a hospital admission might not be recorded by the police. Many of these incidents occur in places other than on public roads (e.g. in parks or open spaces, or on the rights of way network), hence they are outside the scope of police reporting. In other cases the parties involved may conclude that the injury is too slight to call the police or go to a police station; or the police themselves may decide (sometimes wrongly) that the incident is not important enough to spend time on the paperwork. Given the uncertainties around under-reporting levels, Cycling UK bases its calculations on the risk that cyclists pose to pedestrians on the best figures available, i.e. DfT's *Reported Road Casualties GB*, whilst acknowledging that under-reporting does exist.

² **Note on the calculations on p3:** DfT's table '*Reported casualty and accident rates by urban and rural roads, road class, road user type, severity*' (RAS30018) is the usual source for rates of pedestrian injury in collision with vehicles per billion vehicle miles. Our tables have been calculated, however, from casualty figures (RAS40004) and traffic estimates because it appears that RAS30018 hasn't been adjusted to take account of revised pedal cycle traffic figures for 2014 (they were revised upwards from c.2.2 billion vehicle miles to 2.3 billion for urban roads (from 3.2 to 3.5 for all roads, urban and rural). This is the difference it makes to pedestrian casualty rates for urban roads in 2014:

	DfT	Cycling UK
Fatalities: pedestrians killed per BVM in collisions involving cycles	1.8	1.7
Serious injuries: pedestrians seriously injured per BVM in collisions involving cycles	39	37.8
All injury collisions: pedestrians hit per BVM in collisions involving cycles	210	202

³ Answer to Freedom of Information request made to DfT by Cycling UK on 9/11/2017.

https://www.whatdotheyknow.com/request/collisions_involving_pedestrians#incoming-1079649 (Note: these figures include: multi-vehicle collisions, in which a cyclist collided with a pedestrian; and collisions where the police attributed contributory factors to the pedestrian, and the pedestrian was uninjured. N.B. it is highly likely that such collisions are underreported – see end note 1 above).

⁴ DfT. *Reported Road Casualties Great Britain 2016*. Sept. 2017. Table RAS 40004.

www.gov.uk/government/collections/road-accidents-and-safety-statistics

⁵ Data supplied on request to Cycling UK by DfT, 09/11/2017.

⁶ DfT. *Reported Road Casualties Great Britain 2016*. Sept. 2017. Table RAS 30026.

www.gov.uk/government/collections/road-accidents-and-safety-statistics

⁷ Answer to Freedom of Information requests made to DfT by Cycling UK (then CTC) on 7/12/2015 & 9/11/2017 (browse requests and search 'pedestrians' & date. <https://www.whatdotheyknow.com/>

-
- ⁸ Answer to Freedom of Information requests to TfL made by Cycling UK (then CTC) on 7/12/2015; and 9/11/2017.
https://www.whatdotheyknow.com/request/pedestrian_ksi_1_from_red_light?nocache=incoming-759237#incoming-759237
- ⁹ Countryside Agency. *How people interact on off-road routes: phase II*. CA report CRN69, 2003.
<http://publications.naturalengland.org.uk/publication/65057>
- ¹⁰ Cycling UK. *Cyclists and pedestrians: attitudes to shared use*. Cycling UK, 2000
- ¹¹ DfT. *Reported Road Casualties Great Britain 2016*. Sept. 2017. Table RAS 20006.
www.gov.uk/government/collections/road-accidents-and-safety-statistics
- ¹² CROW. *Design manual for bicycle traffic*. 2006. Per metre of available width means the number of pedestrians that pass an imaginary line straight across a street in an hour, divided by the total profile width in metres.
- ¹³ DfT. *Cycling in Pedestrian Areas* (TAL 9/93).
<https://www.gov.uk/government/publications/traffic-advisory-leaflets-1989-to-2009>
- ¹⁴ Countryside Agency. *How people interact on off-road routes*. Research Note CRN 32. March 2001.
<http://publications.naturalengland.org.uk/publication/50065>