

**BIRMINGHAM CITY COUNCIL:
"CYCLING IN THE CITY; THE CITY'S CANALS"**

- 1.1 RoSPA is a registered charity that promotes accident prevention in all areas of life - on the roads, at work, in the home, in schools, at leisure and on or near water – in the UK. Our mission is to save lives and reduce injury. We welcome the Birmingham City Council's Scrutiny Inquiry and are grateful for the opportunity to submit evidence. Improving pedal cyclist safety has been a key issue for RoSPA throughout most of our history (the first Cycling Proficiency Test took place at RoSPA's Road Safety Congress in 1947) and has continued to this day.
- 1.2 There are many health benefits from forms of active travel such as cycling. This is because physical inactivity increases the risk of obesity and is a predictor of cardiovascular disease and type 2 diabetes mellitus. Inactivity is a risk factor for some cancers and some aspects of mental health. Overall, this leads to higher levels of mortality and morbidity.
- 1.3 However, while benefiting from active travel, cyclists are also at risk of injury. Perceived and actual safety are both barriers to encouraging more cycling. Every year in Britain around 19,000 cyclists are killed or injured in police reported road accidents, including around 3,000 who are killed or seriously injured.

Cyclist Casualties, 2011ⁱ

Killed	107
Seriously Injured	3,085
Slightly Injured	16,023
Total	19,215

- 1.4 In Birmingham in-between 2005 and 2009 there were on average 62 child cyclist casualties injured each year, of which 8 were killed or seriously injured. On average annually, within the same years, there were 240 adult cyclist casualties of which 30 were killed or seriously injured.
- 1.5 Across the whole of Great Britain there have been large reductions in the number of cyclists killed on the roads since the end of the Second World War. The sharpest fall was between 1949 and the mid 1970s, when annual cyclist deaths fell from just under 850 to around 300. The reason for this was the large decrease in the distance travelled by bicycle which fell from 15 billion miles to around 2 billion miles in the same period.
- 1.6 Traffic volume and the distance travelled by car also increased dramatically within that period. Several studies have also found that traffic volume is predictive of the number of cyclist injuries^{ii,iii} Reducing traffic volume has the potential to improve cycle safety and road safety in general.
- 1.7 It is not inevitable that more cycling will lead to more cycling accidents. One study^{iv} found that slightly more walking and cycling accompanied by the same decrease in car use was broadly safety neutral, but that a large shift from driving to walking or cycling could reduce accidents. Another suggested that replacing 10% of car trips shorter than 7.5 km by bicycle would be safety neutral.^v
- 1.8 The remainder of RoSPA's submission summarises the main approaches that we believe are required to improve cyclists' safety, which is fundamental to encouraging more people to cycle more often.

2. A Strategic Approach to Cycle Safety

- 2.1 Cycle Safety Action Plans, such as the London Cycle Safety Action Plan^{vi} and the Cycling Action Plan for Scotland,^{vii} provide a strong framework for combining increased cycling with reduced cyclist casualties. A plan for Birmingham would provide a framework and impetus for encouraging safe cycling.
- 2.2 Recent years have seen considerable investment in cycling, including in Birmingham. The Government has also put much funding into the Demonstration project, the Cycling City and Towns Programme^{viii} and it would be useful to assess how good practice through that programme could be adopted in Birmingham.
- 2.3 There is much public health interest in cycling given its health benefits, as indicated by the Royal Society for Public Health and the Faculty of Public Health's recommendations for encouraging more cycling.^{ix} There is a clear role for the new public health staff and the forthcoming Health and Wellbeing Boards to work closely with transport planners and road safety professionals. The number of people of all ages reported killed or seriously injured on the roads per 100000 resident population is an indicator in the Public Health Outcomes Framework.
- 2.4 Road safety is connected with many other social issues. Injuries are not evenly distributed through society; the risk of being injured as a cyclist is greater for people from lower socio-economic groups, especially for child cyclists where there is a large difference in the risk of injury between the most and least affluent. A RoSPA review^x of the social determinants of injury found that the difference is most likely due to differences in the amount of road use by cycle, in the design of the physical environment and in the social environment. Addressing or mitigating these social determinants could help to reduce cyclist injuries. This could be done through road design, and the introduction of 20mph zones is effective at reducing inequalities, for example. Many of the approaches suggested by the Marmot Review^{xi} to tackle the social determinants of health may also be beneficial.
- 2.5 The WHO Health Economic Assessment Tool for Walking and Cycling can be used to put a financial value on the benefit from plans to increase the amount of habitual cycling. This tool can be used in transport planning and is available at: <http://heatwalkingcycling.org/>
- 2.5 Assessing whether or not cycling safety is improving requires a rate-based measurement as well as measuring changes in the number of casualties. This is because reductions in casualties can either mean safer environments or less cycling. This data is important to assessing the success of any approach to improve cycle safety.

3. Ensuring a Safer Cycling Environment

- 3.1 Generally, successful attempts to prevent injury have been based around changing the physical environment. These approaches have been called 'passive' as they do not require a large proportion of the population to change their behaviour in order to be effective.
- 3.2 In road safety, the Safe Systems approach, as advocated by the World Health Organisation, is an example of the passive approach to change the physical environment. It is based on the understanding that injury is caused by an exchange of energy in quantities higher than human tolerance to it and that preventing or minimising the exchange of energy prevents injuries.
- 3.3 The safe system approach considers that often mistakes do happen, and given this, roads and cars should be designed so that mistakes do not frequently result in death. It does this by placing human vulnerability to injury at the centre of road design, and proposes that roads, vehicles, and traffic speeds should be modified to prevent exchanges of energy which are likely to cause fatal injuries.
- 3.4 The safe system philosophy applies to all types of roads and can be adopted to prevent injuries to all road users. However, it provides a good starting point for the discussion of cycling safety in the urban environment, and in ensuring that measures to prevent injuries extend beyond trying to change individual behaviour, and include changing vehicles, roads and vehicle speeds. In general the Safe System philosophy identifies ways of separating traffic, especially vulnerable road users on high speed roads. Where this cannot be achieved, the roads are designed to reduce traffic speed.
- 3.5 Creating a coherent network that cyclists can use, separate from high-volume vehicle routes, leads to a safer environment. This can be achieved by creating and linking quieter streets, and by developing routes alongside rivers and canals and through parks. Marked on-road bike lanes can lead to lower injury rates, although they must help cyclists safely negotiate junctions - usually the highest-risk points on the road.
- 3.6 Only a small number of incidents involving cyclists on canal towpaths have been reported to the Canal and River Trust since 2005. Approaches to make the towpath safer have included signage to inform cyclists of places where they should dismount and to encourage courteous towpath use.
- 3.7 Where vehicle and cycle traffic cannot be separated, a Safe System can be achieved by limiting traffic speeds. Countries which have adopted the Safe System typically set speed limits of around 20mph or 30km/h in these circumstances. This limit is chosen because the risk of fatal injury rises steeply at higher impact speeds.
- 3.8 Traffic speeds can be reduced by 20 mph schemes, which are well proven to significantly reduce casualties, especially amongst the most vulnerable road users: children, pedestrians and cyclists. RoSPA strongly supports the use of 20 mph zones as an effective means of reducing road casualties. 20 mph limits, without traffic calming, are being implemented in an increasing number of places because they are cheaper and quicker to introduce, and so can cover a wider area than 20 mph zones with traffic calming. The effects of introducing 20mph limits are generally positive, but as they are more recent than traffic-calmed 20 mph zones, there is still a need for long term evaluations of their effect. They can also be a step towards introducing more effective zones (with traffic calming) especially in locations where there is need to further reduce traffic speeds even after a 20 mph limit has been introduced.

4. Road User Behaviour

4.1 Drivers

There are several well known risk factors amongst drivers that are strongly associated with the likelihood of injury. Wearing seat belts, drink driving and excessive speed are all three of the largest factors; prevention of the latter two helps to create a safer environment for cyclists, as well as all road users.

4.2 Cyclists

As a member of the DfT's Cycling Training Standards Board, RoSPA believes that practical cyclist training schemes to the National Standards for Cyclist Training are an important way to both help cyclists to stay safe and to encourage more cycling. We would like to see an evaluation of the effectiveness of these practical cyclist training schemes at preventing injury. Details of older research about the effectiveness of practical cyclist training are available in a RoSPA paper,^{xiii} but there is little recent research.

4.3 Birmingham City Council road safety team recently ran a project called "Women on Wheels". This was a training course targeted primarily at adult women from ethnic minorities. Level 1 or level 2 Bikability training was delivered without charge and course participants were able to borrow bicycles for the training. The evaluation showed that after the training, participants reported that they had improved their cycling skills and confidence. Women on Wheels is a good example of a project that was led by the road safety team and encouraged both safe and active travel.

4.4 Notwithstanding the above evaluation, there is a general lack of good evaluations of road safety education, training and publicity (ETP) interventions, partly because it is much more difficult to evaluate education interventions, than engineering ones, but also due to a lack of capacity within the road safety profession. To help address this, RoSPA and the Department for Transport, working with local authority representatives, developed www.roadsafetyevaluation.com, and E-valu-it, an interactive tool to help practitioners plan, conduct and publish evaluations of their road safety education interventions. This can be used to evaluate cycling safety interventions.

4.5 Cycle Helmets

RoSPA strongly recommends that all cyclists wear a cycle helmet, as they reduce the risk of suffering a serious head or brain injury in an accident. Of course, they do not prevent accidents, nor do they guarantee survival, but they do provide a last line of defence for the cyclist's head. RoSPA does not support calls for compulsory cycle helmet laws because it is not clear whether such a law would discourage some people from cycling, thereby losing the health and environmental benefits from cycling.

References

-
- ⁱ "Reported Road Casualties in Great Britain: 2011", Department for Transport, 2012, [Reported Road Casualties Great Britain: annual report 2011 - Publications - Inside Government - GOV.UK](#)
- ⁱⁱ "The effects of seat belt legislation on road casualties in Great Britain: Report on the statistical evidence", J Durbin and AC Harvey, Annex A section 3.2
- ⁱⁱⁱ "Determinants of Traffic Accident Mortality in the Netherlands: A Geographical Analysis", Eduard F van Beeck Int. J. Epidemiol. (1991) 20 (3): 698-706
- ^{iv} "The non-linearity of risk and the promotion of environmentally sustainable transport", Rune Elvik, Accident Analysis & Prevention, Volume 41, Issue 4, 2009, www.sciencedirect.com/science/article/pii/S0001457509000876
- ^v "The Effect on Road Safety of a Modal Shift From Car to Bicycle", H Stipdonk & M Reurings, Traffic Injury Prevention, Vol13, Issue 4, 2012, www.tandfonline.com/doi/abs/10.1080/15389588.2012.660661
- ^{vi} www.tfl.gov.uk/assets/downloads/corporate/Cycling/Cycle-Safety-Action-Plan.pdf
- ^{vii} www.scotland.gov.uk/Publications/2010/06/25103912/0
- ^{viii} "Evaluation of the Cycling City and Towns Programme" DfT, 2011 www.gov.uk/government/publications/evaluation-of-the-cycling-city-and-towns-programme
- ^{ix} "12 Steps to Better Public Health", Royal Society for Public Health and the Faculty of Public Health,
- ^x "Social Factors in Road Safety" <http://www.rospa.com/roadsafety/policy/statements/social-factors.aspx>
- ^{xi} "Fair Society Healthy Lives" (The Marmot Review) <http://www.instituteofhealththequity.org/projects/fair-society-healthy-lives-the-marmot-review>
- ^{xii} "The Effectiveness of Cyclist Training", RoSPA, 2001, www.rospa.com/roadsafety/info/cyclist_training_effectiveness.pdf