

IPH response to consultation on  
Dublin City Council's Speed Limit Review, 2016

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## **The Institute of Public Health in Ireland**

The remit of the Institute of Public Health in Ireland (IPH) is to promote cooperation for public health between Northern Ireland and the Republic of Ireland in the areas of research and information, capacity building and policy advice. Our approach is to support Departments of Health and their agencies in both jurisdictions, and maximise the benefits of all-island cooperation to achieve practical benefits for people in Northern Ireland and the Republic of Ireland.

IPH has been actively engaged in research and policy development relating to the interface between health, travel and the built environment. IPH published a review of the *Health Impacts of Transport*<sup>1</sup>, *Health Impacts of the Built Environment*<sup>2</sup>, and *Active travel - healthy lives*.<sup>3</sup> IPH submitted a response to the Road Safety Authority's *Road Safety Strategy 2013-2020* for the Republic of Ireland<sup>4</sup>, in which we highlighted the importance of cross-sectoral working, the importance of supporting active travel and addressing social inequalities in road deaths and injuries. In Northern Ireland IPH responded positively to the consultation on the *Roads Traffic (Speed Limits) Bill* to introduce 20mph speed limits in designated restricted streets.<sup>5</sup> IPH presented evidence to the Regional Development Committee in the Northern Ireland Assembly supporting the case for 20mph speed limits on residential roads.<sup>6</sup> An official report of IPH also submitted consultation responses in the context of Northern Ireland's *Active Travel Strategy*<sup>7</sup> and *Draft Bicycle Strategy*<sup>8</sup> outlining the importance of enhancing levels of cycling and walking to increase levels of physical activity and improve public health.

We welcome the opportunity to submit views on Dublin City Council's Speed Limit Review, 2016.

## Key points

- IPH welcomes the proposal by Dublin City Council's Environment and Transportation Department to adopt bye-laws to expand 30km/hr speed zones in residential and school areas across Dublin City.
- The adoption of the Dublin City Council Special Speed Limit Bye-Laws, 2016 would support the vision set out in the *Transport Strategy for the Greater Dublin Area 2016-2035*<sup>9</sup> to create a safe shared space for all road users.
- The success of the new bye-laws will be enhanced by appropriate measures to support public awareness, consistent enforcement and the introduction of complementary measures such as traffic calming and adequate infrastructure to support safe use of the roads by motorised and non-motorised vehicle users as well as pedestrians.
- The over-riding principle of a Speed Limit Review is clearly stated as road safety. IPH welcomes the contribution that these bye-laws can make to reduce the significant burden of injury, ill-health, disability and premature death associated with road traffic collisions in Dublin City.
- There is convincing evidence that lower speed limits in residential areas result in reductions in frequency of injuries, severity of injuries and fatalities particularly among vulnerable road users such as older people, people with disabilities and young children.
- Notwithstanding the importance of preventing the occurrence of collisions and the importance of minimising injury associated with such collisions, IPH would urge those involved in the Speed Limit Review to better engage with the wider public health gains that can be accrued through reduced speeds on urban roads and streets.
- In particular, IPH would welcome recognition of the wider role of reduced speed limits in making the urban landscape more appealing and conducive to safe physical activity (active play, walking, cycling and running) as well as community and neighbourhood interaction. Such outcomes could be integrated into speed limit reviews and in the evaluation of the impact of the revised bye-laws. The bye-laws would have scope to support the aims set out in government policy on active travel (*Smarter Travel 2009-2020*<sup>10</sup> and *The National Cycle Policy Framework 2009-2020*<sup>11</sup>) and the actions specified under action 33 of *Get Ireland Active! The National Physical Activity Plan*<sup>12</sup>.

- IPH considered that 30km/hr should be the default speed limit for roads in the vicinity of all primary/secondary schools at least during arrival and departure times. This policy should be considered irrespective of whether those facilities are located on arterial roads (currently excluded from 30km/hr in Phase 1) or outside the Phase 1, 2 or 3 areas. It is unclear from the consultation document and the listing of specific schools in the Fifth Schedule of the proposed wording of the Bye-Laws whether this will be delivered as part of the Special Speed Limit Bye-Laws 2016.
- IPH notes that the Phase 1 expansion of the 30km/hr speed limits includes a significant number of named excluded roads. The rationale for these exclusions has not been presented and there is a concern that the number of exclusions may dilute the effectiveness of a consistent speed limit in the Phase 1 area.
- We commend the recognition of the additional vulnerability of children on the roads and the translation of this into additional provisions relating to schools and residential streets. However, IPH would urge further engagement with assessing and responding to the needs of the ageing population, including those with disability, in the appropriate designation of 30km/hr speed limits. For example, it is not clear whether the location of facilities frequently used by older people (such as churches, leisure facilities, public transport hubs and designated senior citizen housing units) are taken into account in the designation of 30km/hr speed limits.
- We note that the Phase 1 area interfaces with the boundaries of Phoenix Park and would urge the Review team to consider whether the Phoenix Park Bye-Laws could be amended to comply with the 30km/hr limits proposed in the new Special Speed Limit Bye-Laws 2016. The purpose of the park is established in law (Phoenix Park Act 1948<sup>13</sup>) as ‘a public park for the general purpose of the recreation and enjoyment of the public’ and not as a thoroughfare for motorised traffic.

## 1. Health in All Policies

The government policy for improving and enhancing population health - the *Healthy Ireland Framework 2013-2015*<sup>14</sup> emphasises the importance of maximizing the health return from a wide range of public policies. Transport policies which promote and facilitate active travel can support government ambitions to increase physical activity, promoting optimal health for the population.

*Smarter Travel*<sup>10</sup> the transport policy for Ireland for 2009-2020, established a national target to reduce the total share of car commuting from 65% to 45%. This is to be accommodated by increases in alternative travel for 500,000 car users by means of walking, cycling and public transport. It is envisaged that by 2020, 200,000 commuters will cycle or walk and 10% of all trips will be by bicycle.

The *National Cycle Policy Framework 2009-2020*<sup>11</sup> details policies required to meet the government target of 10% of all trips by bike. Under Objective 4 the policy commits to providing safe cycling routes to schools and schools will be marked as low speed (30km/hr) environments with speed limits strictly enforced. Objective 15 considers the adoption of the standard Northern European hierarchy of speed limits, with 30km/hr the standard limit in core urban areas and further limits applied on residential streets and at large junctions used by vulnerable road users. Enforcement of the urban speed limits is stressed as a priority.

The *Transport Strategy for the Greater Dublin Area 2016-2035*<sup>9</sup> documents the required transport provision to deliver the national transport objective of a maximum of 45% of car-based work commuting. The Strategy notes the recent cycling boom in Dublin. The introduction of lower speed limits on residential streets and in urban centres is recognized as a means to greater provide for pedestrians.

The *Healthy Ireland Framework 2013-2025*<sup>14</sup> set a target to increase the proportion of the population undertaking regular physical activity by 20%. Speed limits of 30km/hr in residential and school areas would support action area 33 of *Get Ireland Active! The National Physical Activity Plan*<sup>12</sup> which stipulates that the planning, development and design of towns, cities and schools promotes cycling and walking.

## **2. Evidence relating to 30km/hr and 20mph speed restrictions**

It is important to note that in jurisdictions where speed limits are presented as mph, 20mph is considered the equivalent to 30km/hr. It is also important to acknowledge that much of the evidence around 20mph and 30km/hr speed restrictions is based on studies evaluating the impact of 20mph and 30km/hr speed zones (physical traffic calming measures) as opposed to speed limits (signage only). The evidence presented in the following sections clearly stipulates the type of speed restrictions in place and the effects thereof.

### **2.1. Supporting drivers to modify their driving behaviour and changing drivers' perceptions**

Research indicates that in general, drivers use a combination of design issues (such as lane width, visibility and clearance) and road use issues (such as traffic volumes, turning activity and pedestrian activity) in choosing a speed that feels appropriate.<sup>15</sup> While signposting speed can change driver behaviour, that greater effects are seen in the context of more comprehensive measures including speed zones.

There is growing recognition and support for the societal benefits of reducing traffic speed in residential areas. In a review of drivers' perceptions of driving on urban residential streets in a 30km/hr speed limit, the majority of respondents agreed that motorists should give priority to pedestrians/cyclists anywhere they are encountered on 30 km/hr residential streets. However, a majority of the drivers considered breaking the speed limit as a way to reduce their travel time.<sup>16</sup>

Evidence from the pilot schemes in both Portsmouth<sup>17</sup> and Edinburgh<sup>18</sup> found that compliance with 20mph speed limits was achieved if the baseline average traffic speed was already at 24mph or less. A review by the Road Safety Observatory<sup>19</sup> found that 52% of drivers agreed that driving 35mph in 30mph areas is dangerous. In line with other research, speeding on 30mph roads was more commonly reported than speeding on 60mph roads.<sup>20</sup>

### **2.2. Reducing road traffic collisions, injuries and fatalities**

It has been estimated that a reduction of one mile per hour in existing low speed areas resulted in 5% fewer collisions.<sup>21</sup> A recent review of the effects of 20mph zones and limits on health and health inequalities concluded that there was convincing evidence on the effectiveness of these measures in reducing accidents, injuries, traffic speed and volume, as well as improving the perception of safety. The findings of this review are summarised below:<sup>22</sup>

A UK study examining the impact of 20mph speed zones in 200 small residential areas found:

- 61% reduction in total injuries;
- 70% reduction in child pedestrian injuries;
- 48% reduction in child injuries;
- 6.2% reduction in accidents for each 1mph reduction in speed; and
- On average speed reduced from 25 to 16mph<sup>23</sup>

Studies in the Netherlands reported similar effects at 30km/hr:

- 5% reduction in accidents;
- 25% reduction in injuries;
- 85% of traffic travelling at a mean speed of <30km/hr and a 15-30% reduction in traffic volume;<sup>24</sup>
- 25% in injuries over a 15 year period;
- considered to be a cost-effective intervention.<sup>25</sup>

A German study found a 25% reduction in accidents in an area where 30km/hr limits were in place.<sup>26</sup> In Denmark, 15-30km/hr speed zones were associated with a 64% reduction in road user injuries<sup>27</sup>; whilst a London based study reported a 45% reduction in injuries in 20mph zones.<sup>28</sup>

A speed limit of 20mph (30km/hr) slows traffic down sufficiently to adapt to the presence of pedestrians and other road users; a person is seven times more likely to survive if hit by a car travelling at 20mph rather than 30mph.<sup>29</sup>

Lowering the speed limit to 20mph reduces collisions between vehicles and children by up to 70%.<sup>30</sup> Research suggests that one of the risk factors for children in fast traffic environments is a developmental issue: their eyes and brains are not yet mature enough to be able to judge speeds over 20mph.<sup>31</sup>

In Great Britain, 90% of child pedestrian injuries on weekdays occurred on 30mph speed limit roads.<sup>32</sup> In Northern Ireland, for the period January 1999 to March 2009 (inclusive), between 88% (12-15 year olds) and 98% (0-4 year olds) of casualties among boys occurred in 30mph speed limits. A similar trend was observed among girls.<sup>33</sup>

In the Republic of Ireland, road traffic collisions account for over a third (36.7%) of all child deaths, with road deaths the leading cause of child mortality<sup>34</sup>. The Road Safety Authority's *Child Casualties Report*<sup>35</sup> documents that over the period 1997-2012, 262 children aged 14 and under were killed on Irish roads. An additional 1,115 children were seriously injured. County Dublin had highest number of child fatalities, representing

15% of all child fatalities. The greatest number of pedestrian deaths among children occurred in Dublin, accounting for 31 deaths, and 27% of all pedestrian fatalities among children. The highest number of pedal cyclist fatalities among children occurred in Dublin, accounting for 4 deaths and 12% of all pedal cyclist fatalities among children.

Residential streets differ significantly from main thoroughfares, in that they are likely to have a significant number of more vulnerable road users, especially children, older people and disabled people. Research shows that the impact of pedestrian fatality drops from 7% at 30mph to 1% at 20mph.<sup>36</sup> However when considered by age group, the vulnerability of older pedestrians is clear as their risk of fatality at 30mph is 47%.<sup>37</sup> Older pedestrians are particularly vulnerable since they are largely unprotected and even in moderate collisions are at greater risk of fatality or serious injury.<sup>38</sup>

There are significant inequalities in child injury, with children who live in deprived areas at greater risk of injury. A review of child pedestrian road casualty data between 1999 and 2008 found that children living in the most deprived areas of Northern Ireland were 4.8 times more likely to be injured as a pedestrian in a road collision than those living in the most affluent areas.<sup>39</sup> A further study found that children living within the most deprived areas of North and West Belfast were over three times more likely to be involved in road traffic accidents.<sup>40</sup>

### **2.3. Creating a more liveable environment for road users and residents**

While the primary focus of the proposed bye-laws is on reducing road traffic injuries, slowing down traffic in residential streets and school areas has the potential to deliver broader return to public health as streets become more conducive to play and social interaction. There is growing international interest in redressing the balance between people and traffic through participation in movements such as *Living Streets* (UK)<sup>41</sup> and *Complete Streets* (USA).<sup>42</sup> *Complete Streets* integrates people and place in the planning, design, construction, operation, and maintenance of transportation networks. A recent review found that *Complete Streets* projects tended to improve safety for everyone, increased cycling and walking, showed a mix of increases and decreases in motorised traffic, as well as support for economic investment.<sup>43</sup>

Social networks are important for both physical and mental health but heavy motor traffic has been shown to have a negative impact on opportunities for social interaction among residents. A recent study in Bristol found that the average resident on a busy street had less than one quarter the number of local friends compared with those living on a similar street with little traffic.<sup>44</sup>



One of the main reasons for the introduction of 30km/hr speed limits is to make residential and school streets safer. Evaluations of a number of pilot schemes demonstrated that local residents felt their areas were safer for walking and cycling. The overall level of support for the 20mph speed limits on residential streets in Edinburgh increased from 68% 'before' to 79% 'after', while the proportion of respondents strongly supporting the 20mph speed limit increased significantly from 14% 'before' to 37% 'after'.<sup>18</sup>

Residential streets are typically where children play, learn to ride a bicycle, meet their friends and cross the road to get to friends' houses or play areas. Parents who perceive their street as a safe place are more likely to let their children play outdoors. *Ready, Steady, Play!*, Ireland's National Play Policy, points out that "increased traffic [...] has resulted in parents becoming increasingly reluctant to allow children to play unsupervised outside their own homes".<sup>45</sup> The development of traffic calming measures are identified as a key action area under the objective of ensuring children's play needs are met through the development of child-friendly environments. Play is crucial to children's health and development; it improves their physical and mental health and can help to maintain a healthy weight.<sup>46</sup> In Edinburgh, the proportion of older primary school children allowed to play unsupervised outside their home on the pavement or in the street rose from 31% to 66% following the introduction of 20mph speed limits.<sup>18</sup>

#### **2.4. Enhancing the environment for active travel**

Slowing down traffic can help make residential streets and school zones safer and more attractive for walking and cycling, thus contributing to a modal shift away from cars towards active travel. Short journeys are particularly amenable to change in favour of active travel. However, fear of injury can put people off walking and cycling; therefore creating safer roads can help encourage active travel.<sup>32</sup> In Dublin 41% of all journeys undertaken are for distances of less than four kilometres.<sup>47</sup> Currently, 66% of all journeys in Dublin are taken by private transport, while 19% are on foot and 3% by bicycle.<sup>47</sup>

The profile of road users in Dublin is changing with increasing numbers of people walking and cycling. The Dublin Cordon traffic counts between 2006 and 2015 record an increase in crossings into the city on foot (8.3% to 9.4%) and by bicycle (2.3% to 5.4%).<sup>48</sup> *The National Cycle Policy Framework 2009-2020*<sup>11</sup> sets out a vision that seeks to establish a safe, shared space for cyclists and all road users. This is an important dimension of the strategy, given the needs of this growing group of road users. The introduction of the Dublin public bike hire scheme, coupled with the proposals for 30km/hr speed limits, offers a unique opportunity to facilitate active travel in a safe and sustainable way.

### **3. Specific considerations for the Special Bye Laws 2016**

In light of the evidence presented above, IPH would recommend that special consideration be given to the needs of the most vulnerable road users including children, people with disabilities and older people in the designation of all speed limits. It is notable that the current system in the designation of 30km/hr speed limits relies to some extent on representations being made by the general public to elected representatives. Notwithstanding the importance of listening and responding to the public voice, community and individual representations, it is evident that the needs of some of the more vulnerable community members may not be as well represented as others. As well as engagement with data on road speeds and on fatalities, there is an opportunity to engage with other evidence relevant to the needs and aspirations of local communities.

The epidemiology of road injuries clearly show that children and older people are vulnerable to injury, with older pedestrians a particular concern. Studies in Belfast show that children living in the most disadvantaged communities are at particular risk, and that risk is amplified in urban areas where children have many roads to cross on their way to and from school. We would urge the Council to take these considerations into account when electing areas for 30km/hr speed limits and when taking decisions on additional measures and enforcement as well as in deciding on exclusions within 30km/hr zones.

Access to green space has emerged as an important contributor to public health<sup>49</sup> and Dublin City has the benefit of a large green space close to the city centre in Phoenix Park. We note that the Phase 1 area interfaces with the boundaries of Phoenix Park. We would urge the Review team to consider whether the Phoenix Park Bye-Laws could be amended to comply with the 30km/hr limits proposed in the new Special Speed Limit Bye-Laws 2016. The purpose of the park is established in law (Phoenix Park Act 1948<sup>13</sup>) as ‘a public park for the general purpose of the recreation and enjoyment of the public’ and not principally as a thoroughfare for motorised traffic.

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