



# **NATIONAL PEDESTRIAN SAFETY ACTION PLAN**

**2010 - 2014**

Údarás Um Shábháilteacht Ar Bhóithre  
Road Safety Authority

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## Summary

This report sets out a Pedestrian Road Safety Action Plan for Ireland. It covers the period 2010 – 2014. The Action Plan is a requirement under Action 80 of the Road Safety Strategy 2007 – 2012.

The issues identified, subsequent targets set, and 24 separate actions set out to address these have been informed by the results of an in-depth analysis of pedestrian collisions over the period January 1999 to December 2008, and are supported by research and best practice from countries in the European Union and beyond.

All targets have been set against a 2004-2006 baseline, with completion of the overall plan by the year 2014. Where relevant, existing national targets on reducing fatalities and injuries have been adapted for pedestrian road users.

## Consultation Process

This document obtained the input and views of a broad range of stakeholders on the enhancement of pedestrian safety on Irish roads through the development of a fully integrated Pedestrian Safety Action Plan. We heard from pedestrians, drivers, interest groups and others who had views, advice and suggestions as to how policy could be developed so as to:

- reduce the incidents of deaths and injuries to pedestrians
- support the development of walking as a safe and viable means of mobility
- attain and surpass international best practices in the area of pedestrian safety

The consultative process commenced on 17 April 2009 and lasted until July 2009.

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## 1 Introduction

### 1.1 Background

1.1.1 Walking is a fundamental activity among all road users, with every journey comprising at least some element of pedestrian activity. A key emphasis in sustainable transport strategies, Safer Routes to School programmes and the Green-Schools<sup>1</sup> programmes to encourage walking. The need to reduce pedestrian fatalities and injuries arising from road collisions in conjunction with these wider strategies is a key aim of a dedicated Pedestrian Safety Action Plan.

1.1.2 In 2008, 49 pedestrians were killed and a further 1,173 were injured<sup>2</sup> on Ireland's roads, accounting for 18% of all fatalities, and 12% of all casualties. In 2003, coinciding with the introduction of penalty points, the number of pedestrian deaths fell substantially, but since then the trend in the number of pedestrian fatalities has been gradually upward<sup>3</sup> and the requirement for a dedicated Pedestrian Road Safety Action Plan was identified in the Road Safety Strategy 2007-2012 with the specified objective to:

*'Research, develop and publish a Pedestrian Road Safety Action Plan incorporating best practice in engineering, education and enforcement issues'*

1.1.3 In response to this identified requirement, this document has included a detailed analysis of pedestrian collision and casualty statistics over the ten year period January 1999 to December 2008, in order to identify the key factors influencing the number of pedestrian deaths and injuries in Ireland. The results of this have been used to inform and focus development of this first Pedestrian Safety Action Plan. This document also draws on the insight and experience of countries implementing best practice in pedestrian road safety, both across Europe and beyond.

### 1.2 Context of the National Road Safety Strategy

1.2.1 In addition to the need for a specific Pedestrian Road Safety Action Plan a number of specific issues were identified within the Road Safety Strategy with regard to pedestrian safety, as follows:

- *'Speed inappropriate for, or inconsistent with, the prevailing circumstances or driving conditions'* was identified as one of the four primary causes of road collisions, deaths and injuries. Excess vehicle speeds have been identified as a primary contributor to fatalities among vulnerable road users such as pedestrians, and tackling speeding issues will be likely to have a positive effect in reducing the number of pedestrian fatalities
- Another of the four primary causes of road collisions, deaths and injuries on Ireland's roads was *'Unsafe behaviour towards/ by vulnerable road users'*, which includes pedestrians. This is a more general issue, which will be addressed through a variety of actions in this Action Plan

1.2.2 The Road Safety Strategy also includes a road safety engineering target with regard to traffic calming which is likely to have a positive effect on pedestrian safety, and so this has been supported and reinforced in the Pedestrian Safety Action Plan. This Road Safety Strategy states:

<sup>1</sup> Green-Schools, known internationally as Eco-Schools, is an international environmental education programme, environmental management system and award scheme that promotes and acknowledges long-term, whole school action for the environment. For further details see [www.greenschoolsireland.org](http://www.greenschoolsireland.org)

<sup>2</sup> Road Collision Facts 2007, Road Safety Authority – Tables 3 and 4.

<sup>3</sup> Road Safety Strategy 2007-2012, Road Safety Authority – Section 1.2

*'Traffic calming measures will be implemented at 20 schemes per annum on national roads. It is proposed to complete the Traffic Calming Programme on National Roads during the lifetime of this Strategy'*

1.2.3 Whilst this will contribute in some way to reducing pedestrian road deaths and injuries, the focus of this Action Plan will primarily be on regional and local roads

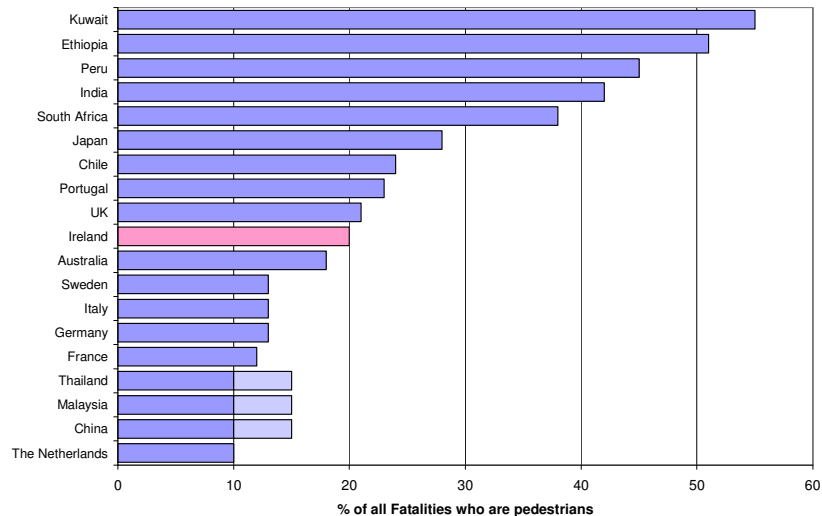
1.2.4 All of the above issues have been taken into account as far as possible in formulating a Pedestrian Safety Action Plan, which seeks to maximise the potential for reducing pedestrian deaths and injuries on Ireland's roads.

### 1.3 Ireland's Position in the EU and Rest of World

#### **Worldwide Comparison of Proportion of Pedestrian Fatalities**

1.3.2 At 20% of all road user fatalities (2006 figures)<sup>4</sup>, the proportion of pedestrian fatalities in Ireland is lower than in many countries around the world. This is shown in Figure 1.1.

**Figure 1.1: Comparison of Worldwide Percentages of Road Collision Fatalities who are Pedestrians**



Note - Thailand, Malaysia and China have a range between 10-15%.<sup>5</sup>

1.3.3 Nevertheless, in countries such as the Netherlands, the proportion is very much lower, at only around 10% of all road user fatalities.

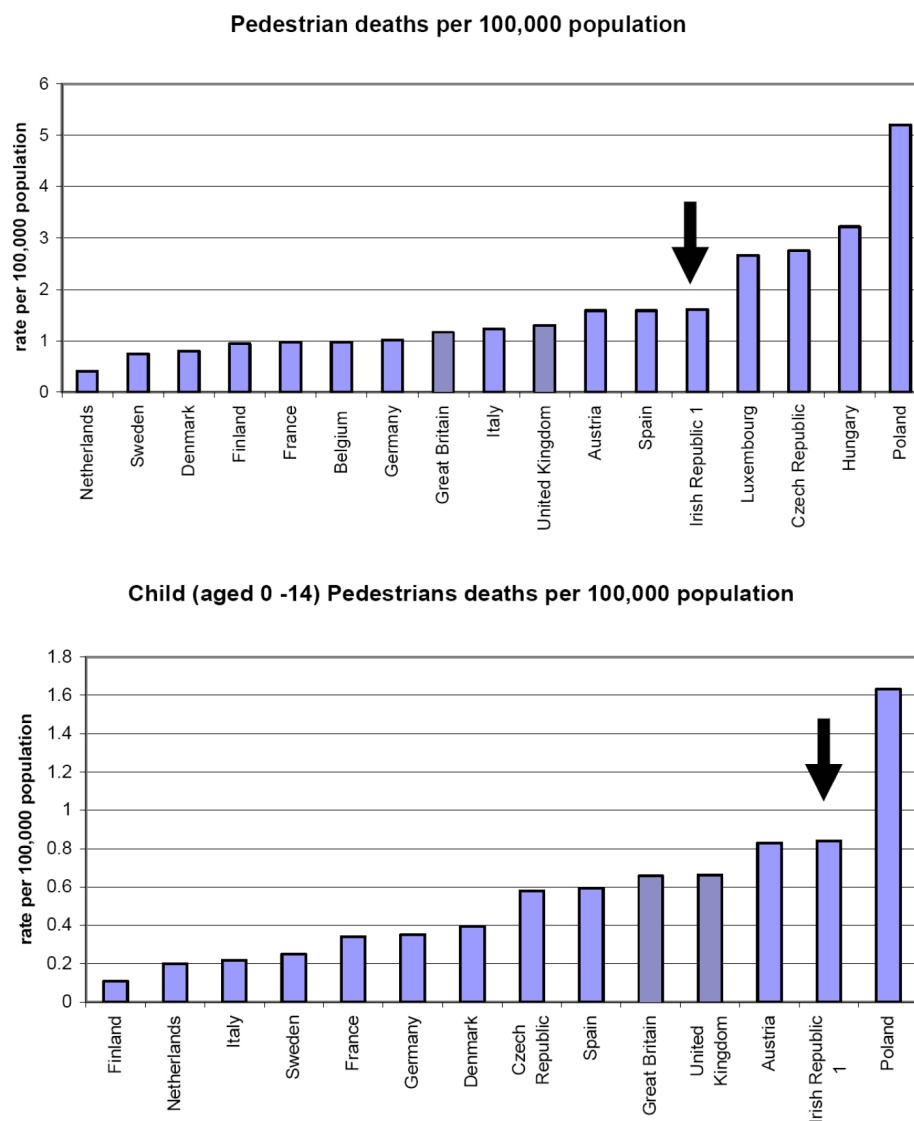
#### **Pedestrian deaths per 100,000 Population within the EU**

1.3.4 In terms of overall pedestrian deaths per 100,000 population, as well as child pedestrian deaths, the Republic of Ireland is seen to perform poorly in comparison with other EU countries which further underlines the need for a Pedestrian Safety Action Plan. This is shown in Figure 1.2.

<sup>4</sup> Road Collision Facts 2006, Road Safety Authority – Table 3.

<sup>5</sup> See 3.8.14 of the National Pedestrian Safety Action Plan Technical Report for the sources of each of the figures and the years to which the data refers.

**Figure 1.2: Comparison of Pedestrian Death Rates with those of other EU Countries (2004<sup>6</sup>) – Road Casualties Great Britain (RCGB) 2005, UK Department for Transport, 2006**



***Ireland's Current Position***

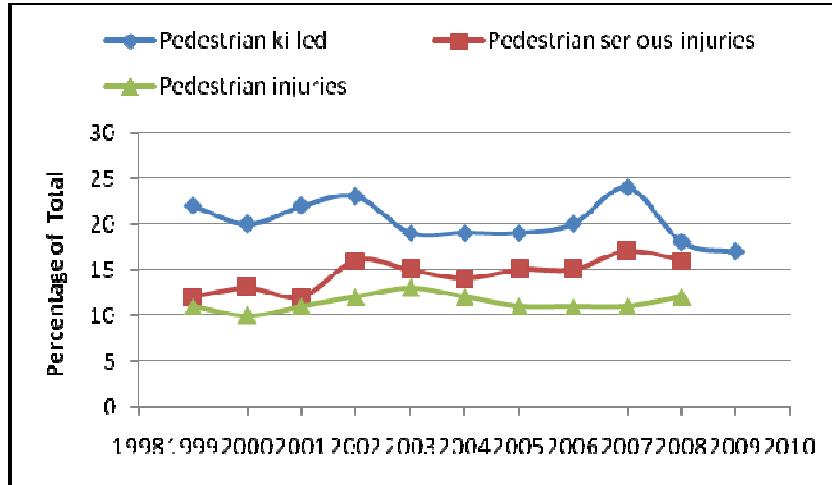
1.3.5 Pedestrian fatalities in Ireland in 2008 accounted for 18% of all fatalities<sup>7</sup>, and collisions involving pedestrians accounted for 18% of all fatal collisions<sup>8</sup>. Therefore reducing pedestrian deaths would be a major factor in helping to reduce the overall numbers of road traffic fatalities in Ireland. The trend in pedestrian deaths and injuries, expressed as a percentage of all road deaths and injuries during the period 1999 to 2008 is shown in Figure 1.3.

<sup>6</sup> Note that in this RCGB graph, the data provided for Irish Republic is for 2006

<sup>7</sup> Note that the percentage of casualties varies from the percentage of collisions involving pedestrians, since there may be more than one casualty (of any road user type) associated with a single collision.

<sup>8</sup> Road Collision Facts 2008, Road Safety Authority – page xi, Primary Collision Type

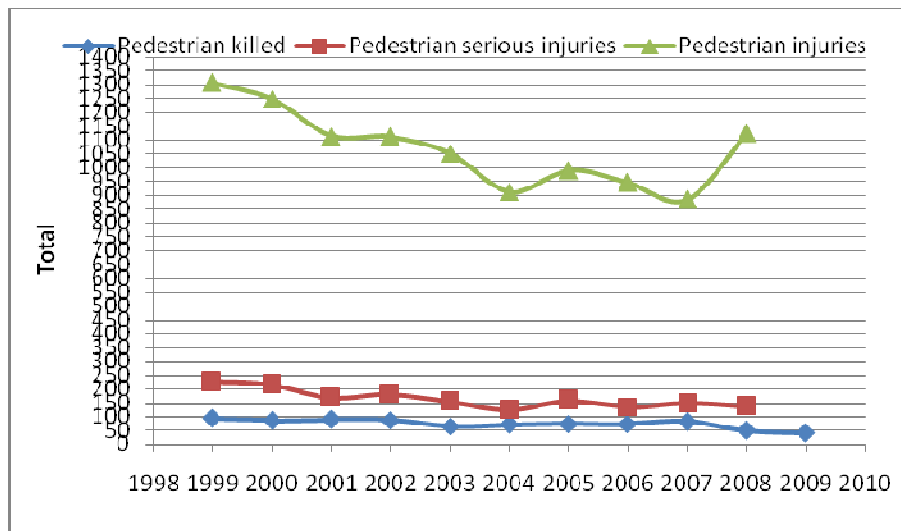
**Figure 1.3: Pedestrian deaths and injuries as a percentage of all road deaths and injuries in Ireland (1999 – 2008)**



1.3.6 It is apparent from the figure above that pedestrians form a higher proportion of road user fatalities than injuries. In addition, the general downward trend in overall pedestrian deaths and injuries has also slowed or reversed.

1.3.7 The need for a dedicated Action Plan for reducing pedestrian deaths and injuries is thus clearly illustrated.

**Figure 1.4: Trend in pedestrian deaths and injuries (1999 – 2008)**



\*2009 fatality figures are provisional

In implementing this National Pedestrian Safety Action Plan, we would seek to reduce both the number and proportion of pedestrian road user deaths and injuries, and child pedestrians in particular, both in real terms, and relative to other countries in Europe and the rest of the world.

## 1.4 Research and Analysis

### *Methodology and Results of Collision Analysis*

- 1.4.2 This report is based on a comprehensive analysis of pedestrian casualties and collisions occurring on Ireland's roads between 1999 and 2008, together with a review of the international literature.
- 1.4.3 It will be seen that the main points emerging from this report are grouped into the four broad headings of: Who?; When?; Where?; and What Happened?

#### **Who?**

- Casualty rates per 1000 population per annum were highest among children and young people aged 5-16, males aged 17-24, and among the over 60s. Together these three groups comprised over half of all pedestrian casualties over the last ten years to the end of 2008.
- Over the period 1997-2009, 1,047 pedestrians have been killed on Irish roads
- 30% of pedestrians killed were aged 65 and over
- The next biggest cohorts of pedestrian fatalities are between 5-16 year old children and males between 17 and 24.

#### **When?**

- 35% of the pedestrians killed were killed between the hours of 17:00 and 21:59
- 52% of pedestrians were killed on Friday, Saturday and Sunday

#### **Where?**

- 27% of pedestrians were killed on dark roads with no lighting
- 55% of pedestrians were killed in urban areas

#### **What Happened?**

- Approximately one in five of those killed in alcohol-related crashes in 2003 were pedestrians, and alcohol was a factor in 38% of fatal pedestrian road crashes<sup>9</sup>.
- 1.4% of all pedestrian-involved collisions between 2004 and 2006 recorded drivers travelling in excess of the posted speed limit. However experience shows that this figure is likely to be an under-estimate<sup>10</sup>.

<sup>9</sup> Alcohol in Fatal Road Crashes in Ireland in 2003, Population Health Directorate, Health Service Executive 2006.:

<sup>10</sup>Reducing Traffic Injuries Resulting from Excess and Inappropriate Speed, European Traffic Safety Council, 1995.



### ***Literature Review***

- 1.4.4 In setting targets for casualty reduction and setting out actions and requirements, relevant documents have been referenced as appropriate throughout the text.

## 2 Proposed Pedestrian Safety Action Plan

### 2.1 Overview

2.1.1 International consensus has concluded that the delivery of integrated programmes built from the four “E”s is of pivotal importance in reducing road deaths. Within the context of improving pedestrian safety, these 4 “E”s are:

- **Education** – raising awareness of road safety by imparting knowledge and developing an understanding of the risks with a view to changing attitudes and behaviour at individual, community and organisational levels
- **Enforcement** – visible and appropriate enforcement acting as a deterrent and increasing compliance with road traffic laws. Whilst mainly concerned with the road users who cause injury to pedestrians, consideration is given here to ways in which potentially dangerous behaviour by pedestrians could be addressed.
- **Engineering** – making the road network safer and more forgiving of inevitable errors by road users, as well as consideration of the particular facilities which would assist pedestrians in making safer journeys on foot. Vehicle design and engineering in terms of reducing potential injury to pedestrians when involved in a collision is also considered here
- **Evaluation** – ensuring sustainable reductions in pedestrian road deaths and injuries, through development of appropriate assessment and monitoring methods and procedures to assess and review both the relative success of individual measures implemented and of the Action Plan as a whole

2.1.2 In considering the outcomes of the Collision Analysis and International Literature Review, the subsequent Action Plan and Actions are set out according to the Four Es above, and form the Policy Framework for the National Pedestrian Safety Action Plan.

### 2.2 Objectives

2.2.1 The Pedestrian Road Safety Action Plan seeks to:

- Support the promotion of walking as a safe, desirable and viable mode of transport;
- Reduce the number and severity of pedestrian collisions occurring on Ireland’s road network;
- Focus on cost-effective measures to address the causes of pedestrian fatalities and injuries, to include issues already identified in the main Road Safety Strategy which have an impact on pedestrian safety (speeding, alcohol/drugs impairment fatigue and unsafe behaviour towards/ by pedestrians);
- Monitor, evaluate and review all pedestrian-involved collisions;
- Operate within the context of the Road Safety Strategy and its stated objectives, actions and targets.

2.2.2 The RSA will submit an Annual Report to the Minister for Transport reporting on the implementation progress of the Pedestrian Safety Action Plan.

## **2.3 Education, Encouragement and Promotion**

- 2.3.1 The aim of the measures set out under this heading is to ensure that pedestrians, and those causing injury to pedestrians, develop and continue to practice appropriate attitudes and safe behaviours. In order to achieve this, relevant knowledge and skills must be imparted to road users as they move through life.
- 2.3.2 An aim is to provide formal, structured road safety education programmes to our at-risk road users, especially the young and the old. These should provide a grounding in road safety issues which will serve them throughout their lives as road users, and should continue to provide access to information and advice through websites, information leaflets and publications to all road users.

### ***Pre-Primary Education***

- 2.3.3 The RSA will continue to support existing provision of materials as appropriate to expectant parents and pre-school children, but will review the content of these to ensure that there is sufficient focus on the identified risks to young children associated with crossing between parked cars and playing in the road.

### ***Primary and Post-Primary Education***

- 2.3.4 Younger road users may be more receptive to, and are likely to gain more long term benefit from, specific road safety education. The RSA is committed to reducing child pedestrian casualties, as well as encouraging safer behaviour throughout life. The current policy is to deliver road user education and awareness in a cumulative approach up to third level. The Pedestrian Road Safety Action Plan will seek to support the actions for road user education set out in the Road Safety Strategy, namely:
- Programmes for expectant parents and pre-school children e.g. “Simon and Friends”;
  - Generic Social, personal and Health Education Programme for Primary and Post-Primary School Children;
  - Green – Schools, Safer Routes to Schools programmes;
  - Implementation of the Transitional Year Programme
  - Third level Road Safety Programme
  - Implementation of the Community Road Safety programme
- 2.3.5 The RSA will aim to ensure that a clear and specific pedestrian safety element is included in all of the above.
- 2.3.6 It is recognised that pedestrian skills training leads to improved child pedestrian crossing skills<sup>11</sup>. Therefore this Action Plan will additionally seek to implement a programme of specific practical road-side training for children aged 5-8 years, which may be based around the “Safer Cross Code” and focuses on the development of three key skills in young road users, namely: choosing safe places and routes; crossing safely in the vicinity of parked cars and crossing safely near junctions.
- 2.3.7 Ireland’s collision statistics indicate that the vast majority of pedestrian collisions occur in built up areas and it is recognised internationally that there is a socio-economic influence in the majority of pedestrian collisions<sup>12</sup>.

<sup>11</sup> Child Good Safety Practice Guide, 2006, (Eurosafe - European Association for Injury Prevention and Safety Promotion).

<sup>12</sup> Tomorrow’s Roads – Safer for Everyone, 2007. UK Department for Transport.

Therefore the RSA will seek to draw up an implementation plan for the provision of such training in order to ensure that resources are appropriately targeted to areas where the potential for casualty reduction will be greatest.

### **Third Level Education**

- 2.3.8 The RSA<sup>13</sup> have already completed work on the development of formal road safety education programmes to engage high risk 17-24 year old road users. As pedestrians in this group (and males in particular) have one of the highest collision rates, the Pedestrian Road Safety Action Plan will seek to ensure that there will be an appropriate focus on specific pedestrian issues, including driver awareness and hazard perception of pedestrians, as well as the risks and hazards associated with being a pedestrian.
- 2.3.9 Research has shown that drivers who score highly on hazard perception tests are less likely to become involved in a fatal crash, and that drivers can be 'trained' in hazard perception. Although the success of such training has not yet been clearly measured, hazard perception has been part of the UK driving test since 2002, and since the 1990s in most of Australia.<sup>14</sup> We would therefore seek to enhance the role of hazard perception with regard to pedestrians among learner drivers, with a view to reducing the number and severity of pedestrian injuries caused by these drivers.

### **Education Through Publicity And Promotion;**

- 2.3.10 It is recognised that *'road safety campaigns as a stand-alone measure generally do not have a large effect on road safety. However, campaigns are crucial as a support for other measures such as legislation and enforcement'* (SUPREME 2007).
- 2.3.11 Thus, we will continue to participate in appropriately timed national promotional and publicity campaigns of direct and indirect benefit to pedestrian safety to highlight the dangers of ;
- Drink and drug driving;
  - Poor conspicuity;
  - Excessive and inappropriate speed – with campaigns to emphasise the dangers and potential consequences of speeding, as well as explain the reasoning behind speed limits;
  - Mobile phones
  - Drunk Pedestrians
  - Driver fatigue.
- 2.3.12 The 17-24 high risk age groups are also best targeted through information and publicity campaigns outlined above, and we would seek to ensure that messages are put across in a format best designed to appeal to this age group.
- 2.3.13 The RSA will continue to participate in schemes to issue high visibility clothing to pedestrians, but it is proposed that these be supported by advertising campaigns during the months with shortest hours of daylight and designed to increase wearing rates of reflective materials. This was successfully implemented in Latvia during 2004 and 2005, with wearing rates increasing from 4% to 20%<sup>15</sup>

<sup>13</sup> in conjunction with the GARDA National Traffic Bureau. Source: RSS 2007

<sup>14</sup> SWOV (Institute for Road Safety Research, Netherlands), September 2007 ([www.swov.nl](http://www.swov.nl)) - Hazard perception research summarised in this.

<sup>15</sup> SUPREME 2007 – Best Practices in Road Safety. Handbook for Measures at the European Level, European Commission.

### **Older Road Users**

- 2.3.14 Pedestrians aged 60+ have been identified by the collision analysis as being one of the higher risk groups, and the issue of an ageing population is likely to influence future trends in collision involvement among this group – not only because of numbers, but also because these road users are more likely to be dependent upon public transport (which will require walking trips also)<sup>16</sup>.
- 2.3.15 Research suggests<sup>17</sup> that older pedestrians are more likely to have physical, visual, and/or hearing impairments which make it more difficult to cross the road safely, particularly at complex junctions. Furthermore, in the US older road users tend to be over-represented in collisions at junctions.
- 2.3.16 Thus this Action Plan will aim to target older pedestrians with information and publicity campaigns. This publicity will enhance the safe use by older pedestrians of pedestrian facilities at junctions, improve their traffic awareness and their awareness of the potential dangers of the road environment.
- 2.3.17 It is recognised that the investment in road safety education is one which may not begin to be reflected in the casualty figures for many years to come, and should be considered an action which will reap long term benefits in terms of casualty reduction.

## **2.4 Enforcement**

- 2.4.1 This section sets out the ways in which the safety of pedestrians can be improved through increased compliance with current legislation, and the development of additional legislative measures as appropriate, within the context of work by An Garda Síochána and supported by the Department of Justice and Law Reform, the Department of Transport and the Road Safety Authority.

### **Traffic Speeds**

- 2.4.2 Traffic Speeds are a major influence on both the number and severity of collisions<sup>18</sup>, and research has shown<sup>19</sup> that in urban areas, vulnerable road users such as pedestrians are particularly at risk from vehicles travelling at excess speed. The benefits of strong enforcement strategies are particularly high for pedestrians: the probability of a pedestrian fatality reduces from 85 per cent at 50 km/h to less than 10 percent at 30 km/h.<sup>20</sup>
- 2.4.3 The Pedestrian Road Safety Action Plan acknowledges the successes in implementing metric speed limits and supports measures set out in the Road Safety Strategy with regard to increasing speed limit compliance, particularly in urban areas where the percentage of drivers exceeding the 50kph limit on arterial roads has increased<sup>21</sup>, and in areas where vulnerable pedestrians such as children and the elderly are likely to be present in high numbers.
- 2.4.4 In the UK, findings have shown that at individual collision sites, speed cameras have led to a 56% reduction in pedestrians killed or injured<sup>22</sup>. An Garda Síochána, through their comprehensive Safety Camera programme, when rolled out in 2010, will increase the enforcement capability at locations with a history of speed collisions. It is expected that a similar decrease of

<sup>16</sup> European Traffic Safety Council, 2002. European Priorities for Road Safety.

<sup>17</sup> NCHRP (National Cooperative Highway Research Program) Report 500, Volume 10 A guide for reducing collisions involving pedestrians

<sup>18</sup> European Transport Safety Council, January 1995

<sup>19</sup> Tomorrow's Roads Safer for Everyone, UK Department for Transport, Chapter 6

<sup>20</sup> ETSC Police Enforcement Strategies to reduce casualties in Europe, 1999

<sup>21</sup> Road Safety Authority, Survey of Free Speed 2006, Urban and Rural

<sup>22</sup> OECD 2003. Road Safety Impact of New Technologies.

pedestrian deaths, as a result of inappropriate speed can be achieved as in the UK.

- 2.4.5 The RSA will encourage local authorities, through their Road Safety Plans, to review speed limits within residential areas, with a view to identifying areas where pedestrian casualties are highest and which may benefit from the implementation of lower speed limits.
- 2.4.6 A key element in the success of enforcement strategies is supporting such campaigns with high profile, visible action, in order to increase perception among possible offenders that they are likely to be caught<sup>23</sup>.

### ***Rules of the Road for Pedestrians***

- 2.4.7 The Action Plan will support the existing requirements and responsibilities of pedestrians as road users as listed in the Rules of Road<sup>24</sup> and the Road Traffic Acts. I.e. (i) to use a footpath where there is one provided and (ii) where there is no footpath provided, to walk as near as possible to the right hand side of the road (facing oncoming traffic), and (iii) not to be drunk and endanger oneself or other road users<sup>25</sup>.

### ***Alcohol and Drugs Impairment***

- 2.4.8 The Pedestrian Road Safety Action Plan supports the implementation of Mandatory Alcohol Testing of drivers, as one in five of those killed in 2003 in alcohol-related crashes were pedestrians. The Action Plan will support focussing on periods when pedestrians are most vulnerable - i.e. at evenings and over weekends.
- 2.4.9 In general terms, the Action Plan will continue to address the issue of pedestrian impairment by alcohol and drugs primarily through publicity and information / awareness campaigns.

## **2.5 Engineering and Planning**

- 2.5.1 Over 80% of pedestrian casualties in Ireland occur on roads classified as 'built up' with an increasing trend of collisions on two-way single carriageways. Therefore, whilst the Pedestrian Road Safety Action Plan supports the work of the National Roads Authority in improving the national roads network, the primary focus of the Pedestrian Road Safety Action Plan will be on improving safety on regional and local roads.
- 2.5.2 In focussing on four main topics, each with a particular emphasis given to selection of schemes in urban areas, it is intended that the investment of resources will be appropriately targeted towards areas of greatest need and highest potential benefit.
- 2.5.3 Land use planning which minimises pedestrian exposure to risk, and the creation of attractive, well connected and safe pedestrian routes are two of the key engineering strategy policies adopted by the EU.
- 2.5.4 Therefore the Action Plan will seek to support the work of National, Regional and local Planning Authorities to ensure that the needs of pedestrians (dedicated provision as well as safe play areas) are considered in statutory plans, guidelines and processes, as appropriate – e.g. Regional Planning Guidelines, Development Plans, Local Area Plans etc.

<sup>23</sup> Police Enforcement Strategies to reduce traffic casualties in Europe (1999) ETSC

<sup>24</sup> Road Safety Authority, 2007.

<sup>25</sup> Note that Items (i) and (ii) are included in the Rules of the Road; item (iii) in the Road Traffic Acts 1961-2000.

### ***Appropriate Measures To Assist Pedestrians***

- 2.5.5 The Action Plan will seek to promote the provision of measures to assist pedestrians which are appropriate to the type of roads used. The emphasis will be on physical separation (including the use of footpaths) of pedestrians in high volume, interurban and national routes, and the provision of appropriate low cost measures, including pedestrian priority options on local and residential routes.
- 2.5.6 The majority of pedestrian injuries occur on built-up local roads. Therefore the emphasis will be on the provision of measures on local roads. To this end, the Action Plan will require Local Authorities, through their Road Safety Plans, to put in place methodologies for the analysis of pedestrian-involved collisions with a view to identifying locations at which appropriate measures to assist pedestrians will be implemented.

### ***Low Speed Zones In Residential Areas***

- 2.5.7 Across Europe, the introduction of low speed zones (typically 30kph) has been successfully implemented in residential areas, around schools and in shopping areas<sup>26</sup>, with reductions in serious collisions by up to 70% noted. If translated to the Irish context, where the vast amount of deaths and injuries occur in built-up areas (83%), this could have an effective outcome in reducing such collisions. This Action Plan encourages the implementation of such zones in areas deemed appropriate by local authorities and referring to the “Guidelines for the Application of Special Speed Limits” as issued by the Minister for Transport to all local authorities on 18 April 2005 pursuant to section 9(9) of the Road Traffic Act 2004 relating to the making of special speed limit bye-laws<sup>27</sup>. The plan will encourage measures to increase the awareness of such speed zones by drivers.

### ***Pedestrian Crossings***

- 2.5.8 The Action Plan will require Local Authorities to provide suitable pedestrian crossings. These crossings should be designed to the best advantage of the pedestrian (including older pedestrians) and should consider appropriate waiting and crossing time, improved legibility and making the walking distance as short as possible

### ***2.5.9 Electric Vehicles***

The Government aims to have 10% of the transport fleet fully electric by the 2020. Based on current numbers this equates to approximately 230,000. There are a number of safety implications for pedestrians pertaining to electric vehicle. These relate to the quietness of such vehicles and the fact pedestrians may find it difficult to be aware of them at all times. The Action Plan will require that research is carried out to quantify the safety issues relating to pedestrians when the widespread use of electric vehicles is introduced.

### ***Street Lighting Considerations***

- 2.5.10 Two in five pedestrian collisions occur during the hours of darkness in poorly lit or unlit areas, and so the appropriate provision or upgrading of lighting provision would be expected to improve safety (as well as security) for pedestrians.

<sup>26</sup> SUPREME, Best Practices in Road Safety – Handbook for Measures at the European level, 2007.

<sup>27</sup> Section 9(9) imposes a general requirement on county and city councils that, in making bye-laws they should have regard to the guidelines issued by the Minister. The deployment of the special speed limit of 30 km/h must be in accordance with the relevant provisions in guidelines issued by the Minister.  
<http://www.transport.ie/upload/general/6589-0.pdf>

- 2.5.11 Pedestrian collision information should be used by Local Authorities to inform and influence street lighting implementation and maintenance programmes, with priority given to schemes where pedestrian safety issues have been identified.

### ***Shared Spaces and Shared Surfaces***

- 2.5.12 Shared spaces and shared surfaces are being used more widely in street design than before. These schemes aim to reduce the dominant role often given (or taken) by the vehicle on a street, thus improving amenity while at the same time improving (or at least not reducing) safety<sup>28</sup>. An example is South King Street (the street onto which the Gaiety Theatre fronts) in Dublin City Centre. Guidance on their use and design is provided (on page 58) of the "Urban Design Manual - A Best Practice Guide", published in December 2008 by the Department of the Environment, Heritage and Local Government<sup>29</sup>.
- 2.5.13 The latest international research on this topic indicates that there has been a surprisingly small number of schemes for which there has been proper evaluation, and it stresses the need for rigorous monitoring of such schemes on collisions and casualties. The research is inconclusive on the safety case for a shared space one way or the other.
- 2.5.14 The RSA is currently monitoring research in this area and will support the development of further policy advice based on the emerging records from recently implemented schemes and data available from more well established shared space schemes throughout Europe.

## **2.6 Monitoring, Review and Evaluation**

- 2.6.1 The Action Plan acknowledges the importance of effective monitoring of progress towards defined targets, the review of actions, and the evaluation of the effectiveness of specific measures. This should ensure that the priority of the components of the Action Plan may be revised over time to best meet a changing need.
- 2.6.2 Key to this is the recording of relevant and accurate collision and casualty data, and the Pedestrian Road Safety Action Plan seeks to support the Road Safety Strategy in working with An Garda Síochána and the Health Service Executive in improving the detail, accuracy and reliability of collision data with regard to pedestrian collisions and casualties.
- 2.6.3 In this dedicated Pedestrian Safety Action Plan, there is also an emphasis on the setting up of standardised methodologies for the monitoring of campaigns, implemented schemes, and other interventions, with a view to better informing future strategies.
- 2.6.4 With regard to speed and alcohol-related collisions, the Action Plan will seek to improve the linking of details of these incidents to the collision records in order to improve analysis capabilities and the quality of monitoring of the effectiveness of enforcement campaigns.
- 2.6.5 The Action Plan will also encourage Local Authorities to undertake 'before and after' studies of schemes implemented, in order to build a local, data-led database for identifying the range of measures most likely to be effective in reducing pedestrian casualties and injuries within the Irish road environment.

<sup>28</sup> Transport Research Laboratory (TRL), Jan 2006. A Review of Simplified Streetscape Schemes – Published Project Report PPR292. Executive Summary – p.ii – iv.

<sup>29</sup> See <http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload,19216,en.pdf>



## **3 Targets**

### **3.1 Targets**

- 3.1.1 The three primary aims of the Pedestrian Road Safety Action Plan have been identified as follows:
- Reducing the number of pedestrian fatalities.
  - Reducing the number of pedestrian injuries
  - Reducing the number of pedestrians killed and injured expressed as proportion of the number of road casualties.
- 3.1.2 In so doing, the successful implementation of this Action Plan will contribute to the success of the Road Safety Strategy in achieving measurable safety improvements in Ireland over the period 2007-2012.
- 3.1.3 Although a wide range of complementary actions and methods to achieve pedestrian casualty savings are set out in this document, this Pedestrian Road Safety Action Plan focuses mainly, but not exclusively, on a small number of key groups identified, namely:
- Child pedestrians and the elderly
  - Pedestrians injured in built up areas
- 3.1.4 In addition, the Action Plan focuses on indirect methods for reducing pedestrian casualties by concentrating on measures to reduce excessive and inappropriate vehicle speeds which are known to be one of the key factors in influencing pedestrian casualty numbers and severity.
- 3.1.5 It is planned that the setting out of a co-ordinated, multi-dimensional Action Plan directed towards the identified areas of greatest concern will help us contribute to achievement for national casualty reduction targets, and pedestrian casualty targets specifically.
- 3.1.6 This Strategy covers the period 2007-2014, and the overall targets have been set in accordance with European Union target of: a reduction in road deaths by 50% by the year 2010 from a base of 2001. This target has then been adjusted appropriately for the timescale of this Strategy. The targets arrived at in the following sections are deemed to be challenging but realistic based on current and recent past trends. Graphical representations of the targets, along with the methods of calculation for each.

### **Reducing Pedestrian Fatalities**

- 3.1.7 As progress towards targets in recent years has slowed, an ambitious target of a 45% (or better) in the reduction in pedestrian fatalities has been set in order to ensure that the wider EU target is also achieved within the lifetime of this Action Plan.

#### **SPECIFIC TARGET**

- *To reduce the number of pedestrian fatalities by 45% (or better), from a base of the 2005-2008 average of 69 per annum, to 38 (or better) by 2014*
- *To reduce the pedestrian fatalities as a proportion of the total road deaths from the base of 20% to 11% (or less) by 2014*

### **Reducing Pedestrian Injuries**

- 3.1.8 Ireland's target with regard to injuries is to achieve a 25% reduction in overall injuries by 2010. This target is supported in the Pedestrian Road Safety Action Plan and in setting a target for 2014, the main target has been projected to 2014 at a level which ensures that a 25% reduction in serious injuries will have been achieved by 2010. In setting this target, consideration has been given to the potential for reduced speeds, improved vehicle design and other factors which may improve the survival rates of pedestrians involved in collisions.

#### **SPECIFIC TARGET**

*To reduce the number of injuries by 45% (or better) by the year 2014, from a base of the 2005-2008 average of 985 pedestrian injuries per annum to 542.*

### **Reducing pedestrian injuries in Built Up areas**

- 3.1.9 Currently, over 80% of pedestrian fatalities and injuries in Ireland occur in areas classified as 'built-up', and so the potential for reducing fatalities and injuries through the implementation of targeted road safety engineering measures, street lighting improvements, and crossing provision and upgrades would be expected to be high.

#### **SPECIFIC TARGET**

*To reduce the number of fatalities and injuries occurring in built up areas by 45% (or better) by the year 2014, from a base of the 2005 -2008 average of 874 pedestrian fatalities and injuries per annum to 481*

### **Child Pedestrians**

- 3.1.10 Pedestrians aged 5-16 accounted for 21% of all pedestrian fatalities and injuries in Ireland in 2006, and one of the key issues of this Action Plan will be

to reduce deaths and injuries among these most vulnerable sections of society.

- 3.1.11 The target for reduction in child pedestrian deaths and serious injuries by the year 2014, from a 2005-2008 average, but includes all child pedestrian injuries, and takes into account the shorter timescale.

**SPECIFIC TARGET**

*To reduce the number of child pedestrian fatalities and injuries aged 5-16 by 45% (or better) by the year 2014, from a base of the 2005-2008 average of 230 child pedestrian fatalities and injuries per annum to 126*

**Older Road users**

- 3.1.12 An international trend towards an ageing population, combined with an increasing involvement of older road users in pedestrian collisions in recent years means that a realistic target for reducing fatality and injury numbers among this age group will require increased efforts to address issues affecting this age group. Key to this will be developing a greater level of understanding of the road safety issues affecting this age group as a first step.
- 3.1.13 Ireland's achievements in recent years have seen an annual average reduction in the number of overall killed and injured aged 60+ by approximately 45%<sup>30</sup>, and it is therefore appropriate to reinforce this target for pedestrian fatalities and injuries in the same age group.

**SPECIFIC TARGET**

*To reduce the number of older pedestrian fatalities and injuries by 45% throughout the life of this Action Plan.*

**Vehicle speeds**

- 3.1.14 The RSA will support national targets and actions set out in the Road Safety Strategy with regard to speed limit compliance on urban national roads in particular, and supports the extension of the compliance target to urban residential roads subject to a 50kph speed limit. The most recent results of free speeds surveys in Ireland indicated that 20% of vehicles in urban residential roads exceeded the 50kph speed limit<sup>31</sup>, and we would seek to reduce this.
- 3.1.15 The Action Plan encourages measures to focus high visibility enforcement action in locations where there are known pedestrian collision issues.

**SPECIFIC TARGET**

*To increase the compliance levels of cars within the 50kph speed limit on urban residential areas to 90%.*

<sup>31</sup> 2009 Survey of Free Speeds

### **Alcohol/ drugs impairment**

- 3.1.16 Specific monitoring of pedestrian involvement in collisions where alcohol (driver or pedestrian) was a factor will be collated and reported on.

#### **SPECIFIC TARGET**

*To increase collection and reporting of rates of Blood Alcohol Concentrations of drivers involved in pedestrian collisions to include all collisions resulting in death or serious injury.*

### **Road Safety Engineering**

- 3.1.17 The collision analysis indicated that the majority of pedestrian collisions occurred on single carriageway roads, with 'otherwise crossing' as a main pedestrian factor. We will therefore seek to focus the implementation of measures to assist pedestrians on these roads.
- 3.1.18 European priorities for pedestrian safety consider engineering measures to create safer pedestrian road environments to have five elements, namely reduction in traffic levels, reduction in traffic speeds, implementation of measures at junctions, redistribution of road space (in favour of pedestrians), and the provision of special facilities for pedestrians (such as dropped kerbs).
- 3.1.19 Local Authorities are encouraged, through their Road Safety Plans, to identify high risk locations for pedestrians, and to prioritise these for implementation of appropriate traffic calming and other measures to improve pedestrian safety. The Road Safety Strategy targets with regard to implementation of remedial measures and traffic calming are supported, as these are likely to offer particular benefits for pedestrians.
- 3.1.20 One key action of the Road Safety Strategy is the provision of resources for the implementation of low-cost safety schemes, and the expansion of medium-cost schemes on non-national roads. Therefore the Action Plan will seek to develop a means by which these resources could be effectively targeted towards areas in which the benefits to vulnerable road users such as pedestrians can be maximised.

#### **SPECIFIC TARGET**

*To put in place a methodology by which Local Authority applications for funding for low and medium costs schemes can be prioritised in terms of pedestrian collision savings.*

### ***Evaluation, Monitoring and Review***

- 3.1.21 This area has been included for the first time in the Road Safety Strategy. The first key step in any successful monitoring and evaluation activity is the setting of a clear baseline, and central to this is robust data. Thus, as a first step, only two specific targets have been set in this area.

#### **SPECIFIC TARGET**

*To review the collisions database with a view to providing comprehensive data for the full analysis of the causes and circumstances of pedestrian-involved collisions.*

*To revise the road collision report (CT68 form) to include a specific measure of the progress towards achieving primary targets with regard to pedestrians*

## **4 Action Plan**

- 4.1.1 A hierarchical table of specific actions linked to each of the four areas of Education, Enforcement, Engineering and Evaluation is presented on the pages which follow.
- 4.1.2 The implementation of the Pedestrian Road Safety Action Plan will be overseen and monitored by the Road Safety Authority through the Road Safety Strategy.

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Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
<b>ROAD SAFETY AWARENESS AND EDUCATION</b>					
1	<p>This Action Plan seeks to reduce the proportion, number and severity of pedestrian fatalities and injuries occurring on Ireland's Road by 2014 through co-ordinated and multi-disciplinary programmes relating to Engineering, Equipment, Enforcement, Education and Evaluation as follows.</p> <ul style="list-style-type: none"> <li>▪ <i>To reduce the number of pedestrian fatalities by 45% (or better), from a base of the 2005-2008 average of 69 per annum, to 38 (or better) by 2014</i></li> <li>▪ <i>To reduce the pedestrian fatalities as a proportion of the total road deaths from the base of 20% to 11% (or less) by 2014</i></li> <li>▪ <i>To reduce the number of injuries by 45% (or better) by the year 2014, from a base of the 2005-2008 average of 985 pedestrian injuries per annum to 542.</i></li> <li>▪ <i>To reduce the number of fatalities and injuries occurring in built up areas by 45% (or better) by the year 2014, from a base of the 2005 -2008 average of 874 pedestrian fatalities and injuries per annum to 481</i></li> <li>▪ <i>To reduce the number of child pedestrian fatalities and injuries aged 5-16 by 45% (or</i></li> </ul>	Road Safety Authority	All stakeholders	CEO Road Safety Authority	4 <sup>th</sup> Qtr 2014



Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
	<p><i>better) by the year 2014, from a base of the 2005-2008 average of 230 child pedestrian fatalities and injuries per annum to 126</i></p> <ul style="list-style-type: none"> <li><i>To reduce the number of older pedestrian fatalities and injuries by 45% throughout the life of this Action Plan.</i></li> </ul>				
2	Implement an annual programme of nationwide media/publicity campaigns, targeting pedestrians addressing the main causal factors in pedestrian collisions with an emphasis on older pedestrians.	Road Safety Authority	An Garda Síochána	Road Safety Authority Director Road Safety Education and Research	Annually
3	Implement an annual programme of nationwide media/publicity campaigns targeting drivers which indirectly address the main causal factors in pedestrian collisions, such as alcohol impairment, speeding and unsafe behaviour towards pedestrians.	Road Safety Authority	An Garda Síochána	Road Safety Authority Director Road Safety Education and Research	Annually
4	Continue to participate in national campaigns to provide high visibility wear to pedestrians, supported by media campaigns to increase wearing rates	Road Safety Authority	An Garda Síochána	Road Safety Authority Director Road Safety Education and Research	Annually
5	Undertake a review of road collisions involving pedestrians with a view to develop effective road safety interventions.	Road Safety Authority	An Garda Síochána, National Roads Authority, HSE	Road Safety Authority Director Road Safety Education and Research	4 <sup>th</sup> Qtr 2010

Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
<b>ROAD USER ATTITUDES</b>					
6	Seek to identify driver attitudes and behaviour towards pedestrians	Road Safety Authority	An Garda Síochána,	Road Safety Authority Director Road Safety Education and Research	1 Qtr 2011
7	Encourage the correct and appropriate use of pedestrian facilities where provided	Road Safety Authority	An Garda Síochána,	Road Safety Authority Director Road Safety Education and Research	Annually

Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
<b>EDUCATION</b>					
8	Continue to develop and implement road safety programmes with an emphasis on pedestrian safety at pre-school, primary level, secondary level, third level and community level	Road Safety Authority	Department of Education and Science, An Garda Síochána, Community Groups	Road Safety Authority Director Road Safety Education and Research	Annually
<b>ENFORCEMENT</b>					
9	Examine the locations of where pedestrian deaths and injuries have occurred with a view to increasing the frequency at which mandatory alcohol testing occurs.	An Garda Síochána	An Garda Síochána National roads Authority, Road Safety Authority	Commissioner An Garda Síochána	Annually
10	An Garda Síochána to concentrate enforcement programmes to deal with pedestrians acting inappropriately on the road. These include: <ol style="list-style-type: none"> <li>1. Proper use of pedestrian crossings</li> <li>2. Using footpaths where provided</li> <li>3. Where no footpaths exist, walking on the right hand side of the road</li> <li>4. Being drunk and a danger to traffic</li> </ol>	An Garda Síochána	An Garda Síochána National roads Authority, Road Safety Authority	Commissioner An Garda Síochána	Annually

Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
11	The Gardaí through their comprehensive safety camera project to enforce speed limits at locations where speed related collisions have occurred with a special emphasis on such collisions involving pedestrians.	An Garda Síochána	An Garda Síochána National roads Authority, Road Safety Authority	Commissioner An Garda Síochána	Annually
12	The Gardaí and the Local Authorities will enforce strictly the regulation pertaining to parking of vehicles on footpaths.	An Garda Síochána	An Garda Síochána National roads Authority, Road Safety Authority	Commissioner An Garda Síochána	Annually
<b>ROAD NETWORK/ TRAFFIC</b>					
13	Work with Local Authorities to identify locations suitable for implementation of 30kph speed limits and pedestrian priority areas	Local Authorities	National Roads Authority	County Manager	Annually
14	Review and report on the redistribution of road space and the creation of pedestrian zones in town centres and locations identified as having high pedestrian flows and a high pedestrian collision rate	Local Authorities	National Roads Authority	County Manager	Annually
15	Explore the introduction of legislation targeting aberrant behaviour of pedestrians in relation to crossing roads such as 'jay walking'.	Department of Transport	Department of Justice and Law Reform	Principal Officer, Road Safety	2012
16	Liaise with schools through "Green Schools" programme to identify walking routes used by pupils and implement schemes to reduce traffic and raise awareness of the presence of pedestrians along these routes	An Taisce,	Local Authorities Road Safety Authority	CEO an Taisce	Annually

Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
<b>ROAD SAFETY ENGINEERING</b>					
17	Review the operation and layout of signal controlled, crossroads and complex junction layouts with a known pedestrian collision record	Local Authorities	National Roads Authority, An Garda Síochána Road Safety Authority ,	County Manager	Annually
18	Identify high risk locations for pedestrian casualties and Implement traffic calming measures as appropriate to improve pedestrian safety and reduce traffic speeds	National Road Authority	Local Authorities	National Roads Authority Senior Project Manager Road Safety	4 <sup>th</sup> Qtr 2014

Action No.	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
<b>OTHER MEASURES</b>					
19	Design and implement street lighting improvement schemes for built-up areas with known pedestrian collision issues	Local Authorities	National Road Authority	County Manager	4 <sup>th</sup> Qtr 2012
20	Develop stronger rules on planning, to ensure that the road safety benefit for pedestrians is maximised and ensure that pedestrian safety is a consideration in the granting of planning permission	Local Authorities	National Road Authority	County Manager	Annually
21	Review the use of pedestrian-friendly fronts to vehicles to reduce injury severity in line with EuroNCAP standards	Road Safety Authority	Department of Transport	Road Safety Authority Director for Standards and Enforcement	Annually
22	Review the research pertaining to the safety implications for pedestrians of the widespread introduction of electric vehicles by 2020	Road Safety Authority	Electricity Supply Board	Director Road Safety Authority Road Safety Research and Education	2 <sup>nd</sup> Qtr. 2011

Action No. (RSS Action)	Measure or Action	Lead Department or Agency	Support Department or Agency	Responsibility	Completion Date
<b>EVALUATION</b>					
23	Improve the accuracy and consistency of reporting of collisions involving pedestrians.	Road Safety Authority	An Garda Síochána National Road Authority	Director Road Safety Authority Road Safety Research and Education	4 <sup>th</sup> Qtr 2010
24	Local Authorities to set local targets for pedestrian fatality and injury reduction through their Road Safety Plans, and monitor progress towards targets	Local Authorities	Road Safety Authority	County Manager	Annually





# Working To Save Lives

## Údarás Um Shábháilteacht Ar Bhóithre Road Safety Authority

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