



RSA

# **FREE SPEED STUDY**

## **Survey Report 2016**

Research Department  
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Údarás Um Shábháilteacht Ar Bhóithre  
Road Safety Authority

## Contents

• Free-Speed Survey – Overview	Page 3
○ Study Objectives	Page 3
○ Methodology	Page 3
○ Key Findings	Page 3
• Speeding on Urban Roads	Page 4
○ Historic speeding rates by years, vehicle type and urban Road – Bar Graph	Page 4
○ Percentage of vehicles on urban roads by road type and degree of violation – Bar Graph	Page 5
• Speeding on Rural Roads	Page 5
○ Historic speeding rates of cars on rural roads – Bar Graph	Page 5
○ Percentage of cars speeding on rural roads by road type and degree of violation – Bar Graph	Page 6
○ Percentage of vehicles speeding on rural roads by road type and degree of violation – Bar Graph	Page 7
• Percentage of cars speeding on Urban and Rural Roadways – Bar Graph	Page 7
• Who’s up and who’s down: speeding by cars	Page 8
• Summary & Recommendations	Page 9-10
• Appendix 1	Page 11-12
○ Detail Tables – Free-Speed by Road Type 2016	
• Appendix 2	Page 13-14
○ Percentage speeding (Urban) 1999 to 2016	
• Appendix 3	Page 15-16
○ Percentage speeding (Rural) 1999 to 2016	
• Appendix 4	Page 17
○ Breakdown of sites by road type and speed limit,2016	
• Appendix 5	Page 18
○ Survey details	
○ Legal speed limits by vehicle type	Page 19
• Appendix 6	Page 20
○ Top 5 locations – Highest volumes	
○ Lowest 5 locations – Lowest volumes	

## Free-Speed Survey - Overview

### Study Objectives:

To determine the incidence of drivers of all vehicle types driving on Irish roads while speeding, and therefore presenting a road safety risk. Speed surveys are designed to monitor changes in the free speeds of vehicles in both urban and rural areas and to measure drivers' choice of speed. Free speed is defined as the *speed at which drivers choose to travel when unconstrained by road geometry (e.g. sharp bends, intersections or hills), weather conditions (e.g. rain) or traffic conditions (e.g. congestion).*





### Methodology:

In September/October 2016, Nationwide Data Collection conducted an observational study of 17,591 vehicles on behalf of the Road Safety Authority. The surveys took place at the roadside at 92 sites: 38 urban (60km/h or less speed limit) and 54 rural (50km/h or more speed limit). Cars (12,428), rigid goods vehicles (2,739), semi-articulated vehicles (1,586), single decker buses (733), double decker buses (54) and Motorcyclists (51) were observed.

Surveys were carried out at the designated locations generally during working hours (8.30am to 5.30pm), Monday to Friday, with some Urban sites surveyed between 05:30 to 07:30. Only speeds of vehicles that were unconstrained - speeds derived from vehicles with a headway / gap of at least 200 metres on roads where it was possible to exceed the speed limit - were recorded.

The target sample size for surveys on urban national roads was: 140 cars, 90 rigid vehicles and 30 articulated vehicles; no quotas were allocated for buses surveyed. The target sample size for urban residential and urban arterial roads was 140 cars (no buses, rigid or articulated vehicles were surveyed for these roads).

### Key Findings:

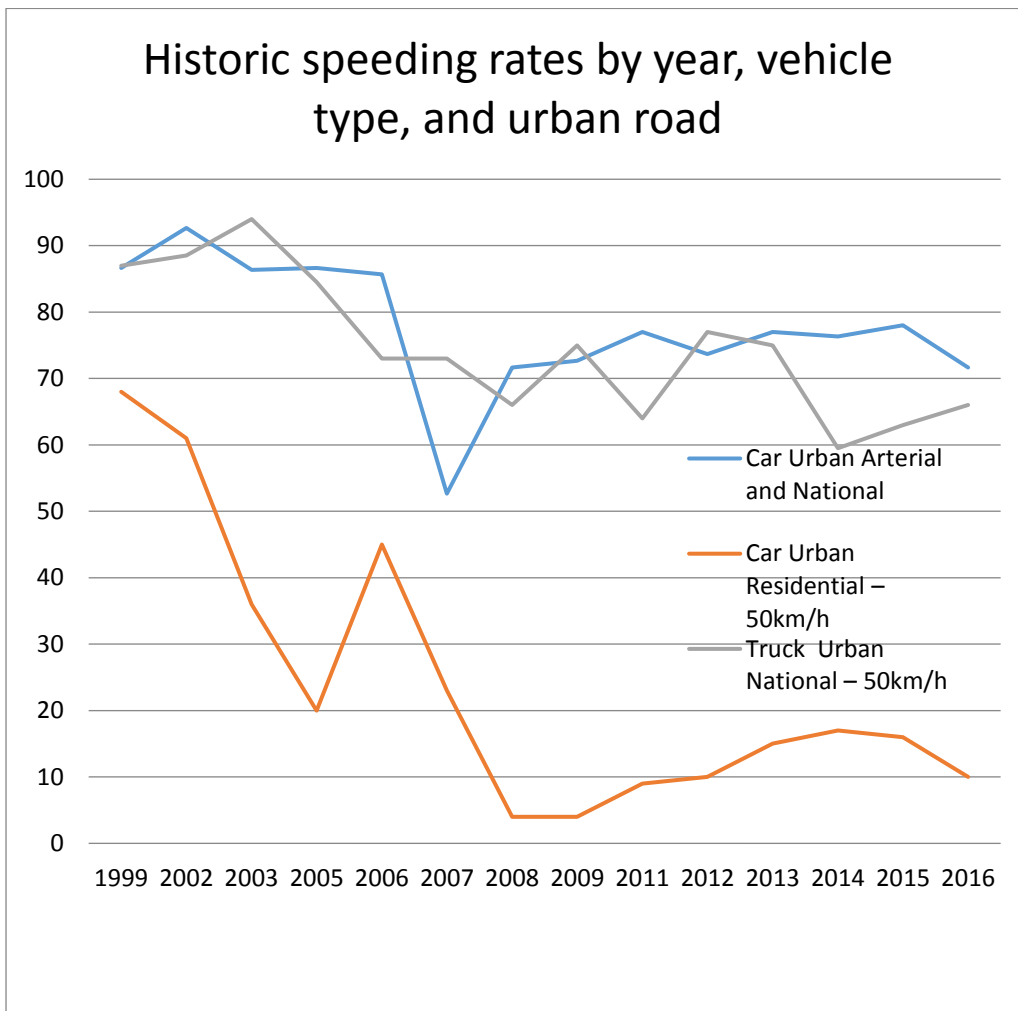
- The percentage of car drivers breaking the speed limit on **urban roads** was 57% (60% in 2015); when residential roads are excluded, this rises to 71% (74% in 2015) for all other urban national roads.
- The percentage of car drivers breaking the speed limit on **rural roads** was 22% (Same in 2015).
- The percentage of cars speeding on **motorways** increased from 21% in 2015 to 23% in 2016.
- The percentage of cars speeding on **dual carriageways – 100kph** increased from 28% in 2015 to 34% in 2016.
- The percentage of cars speeding on **regional 80km/h** roads decreased from 41% in 2015 to 39% in 2016.
- Average car free speed:
  - 113km/h in 2016, 114km/h on **motorways** in 2015; posted limit 
  - 96km/h in 2016, 95km/h on **dual carriageways** in 2015; posted limit 
  - 65km/h in 2016, 67km/h on **urban arterial roads** in 2015; posted limit 
  - 57km/h in 2016, 58 km/h on **urban national roads** in 2015; posted limit 

## Speeding on Urban Roads

Speeding here is defined as driving at a speed greater than the ordinary speed limit for the particular vehicle on the particular road, e.g. the speed limit for a truck is 90km/h on motorways with a posted speed limit of 120km/h (see Appendix 5).

Of the vehicles surveyed 84% (5,269) of cars, 8% (509) of rigid trucks, 5% (329) of articulated trucks, and 2% (143) of buses were on urban roads.

- 57% of all **cars** observed on all urban roads were speeding (60% in 2015);
- 55% of all **rigid trucks** observed on all urban roads were speeding (45% in 2015);
- 55% of all **articulated trucks** observed on all urban roads were speeding (50% in 2015);
- 38% of all **single decker buses** observed on all urban roads were speeding (41% in 2015).



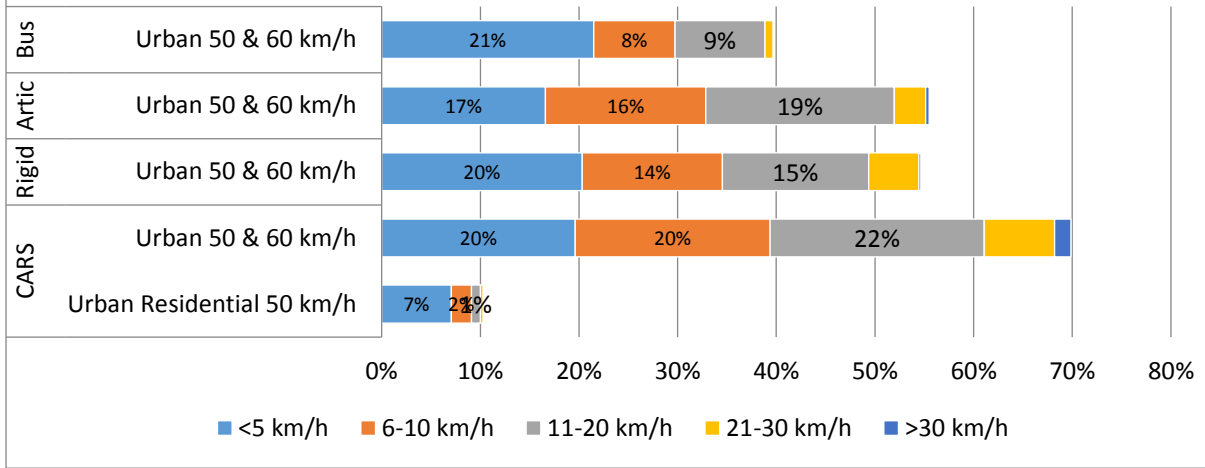
WORST OFFENDERS

917 CARS WERE SPEEDING IN URBAN ARTERIAL ROADS WITH A SPEED LIMIT OF 50 KM/H. OF THESE, FOUR WERE DRIVING OVER 90KM/H WITH ONE DRIVING AT 107KM/H

At the Urban National location, only 3 out of the 140 cars sampled was travelling at or under the 30 km/h speed limit.

At one of the Urban Residential locations, a vehicle was recorded travelling at 74km/h.

Percentage of vehicles speeding on urban roads by road type and degree of violation

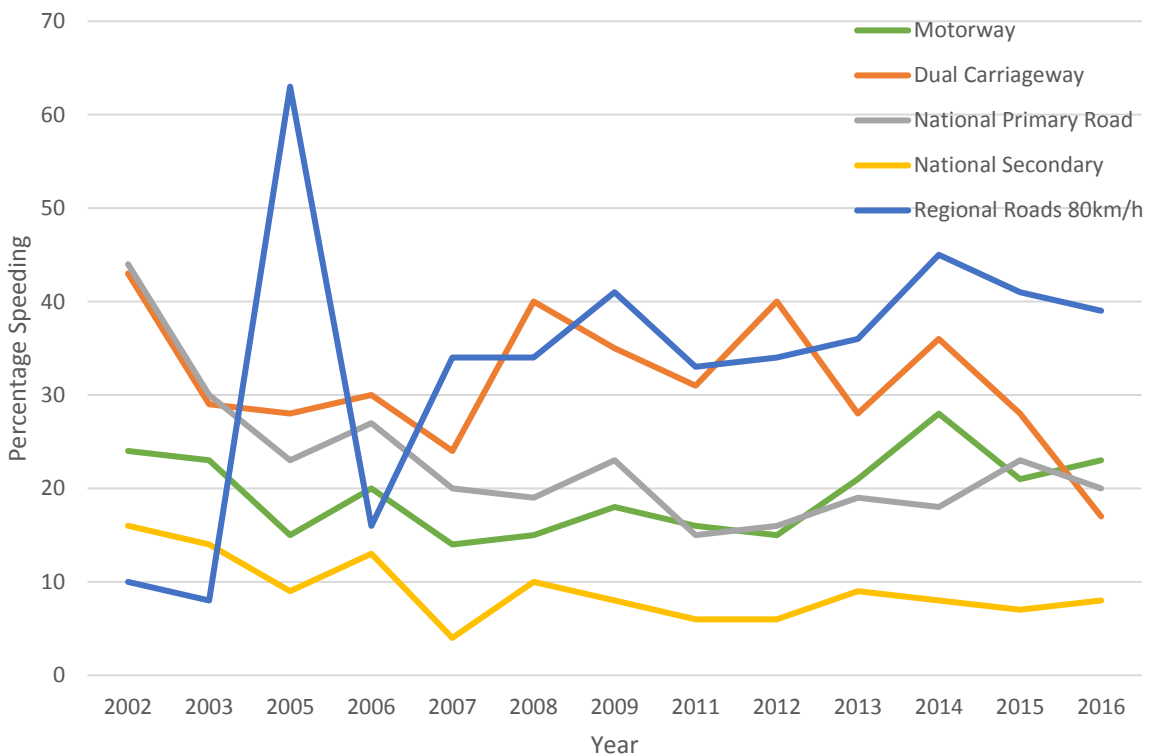


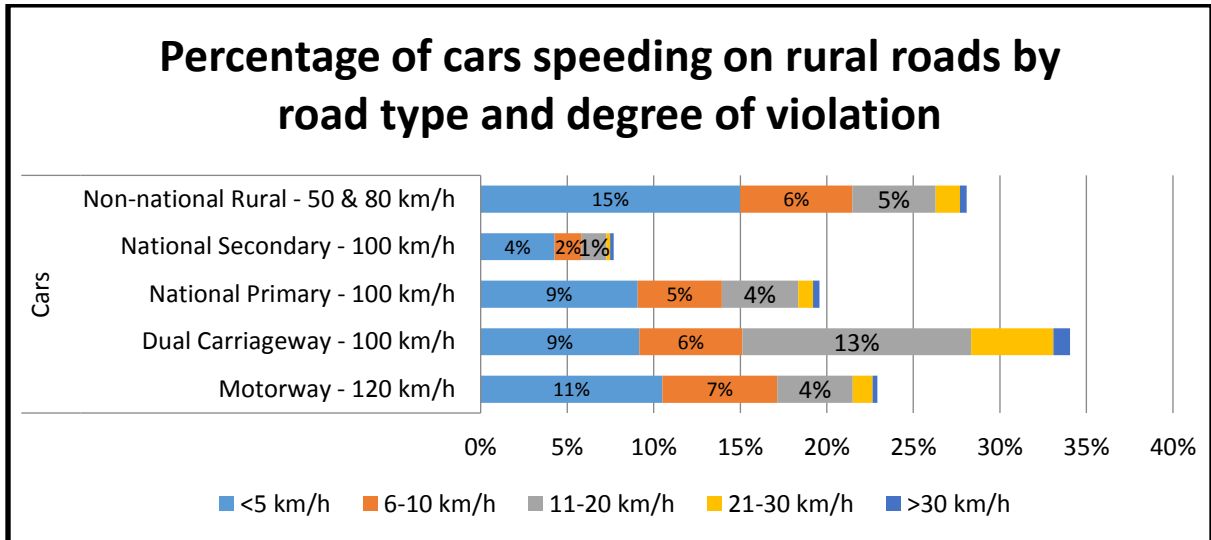
### Speeding on Rural Roads

63% (7,159) of cars, 20% (2,230) of rigid trucks, 11% (1,257) of articulated trucks, and 5% (599) of buses surveyed were on rural roads.

- 22% of all **cars** observed on all rural roads were speeding (22% in 2015);
- 36% of all **rigid trucks** observed on all rural roads were speeding (29% in 2015);
- 38% of all **articulated trucks** observed on all rural roads were speeding (42% in 2015);
- 11% of all **single decker buses** observed on all rural roads were speeding (31% in 2015).

Historic speeding rates of cars on rural roads

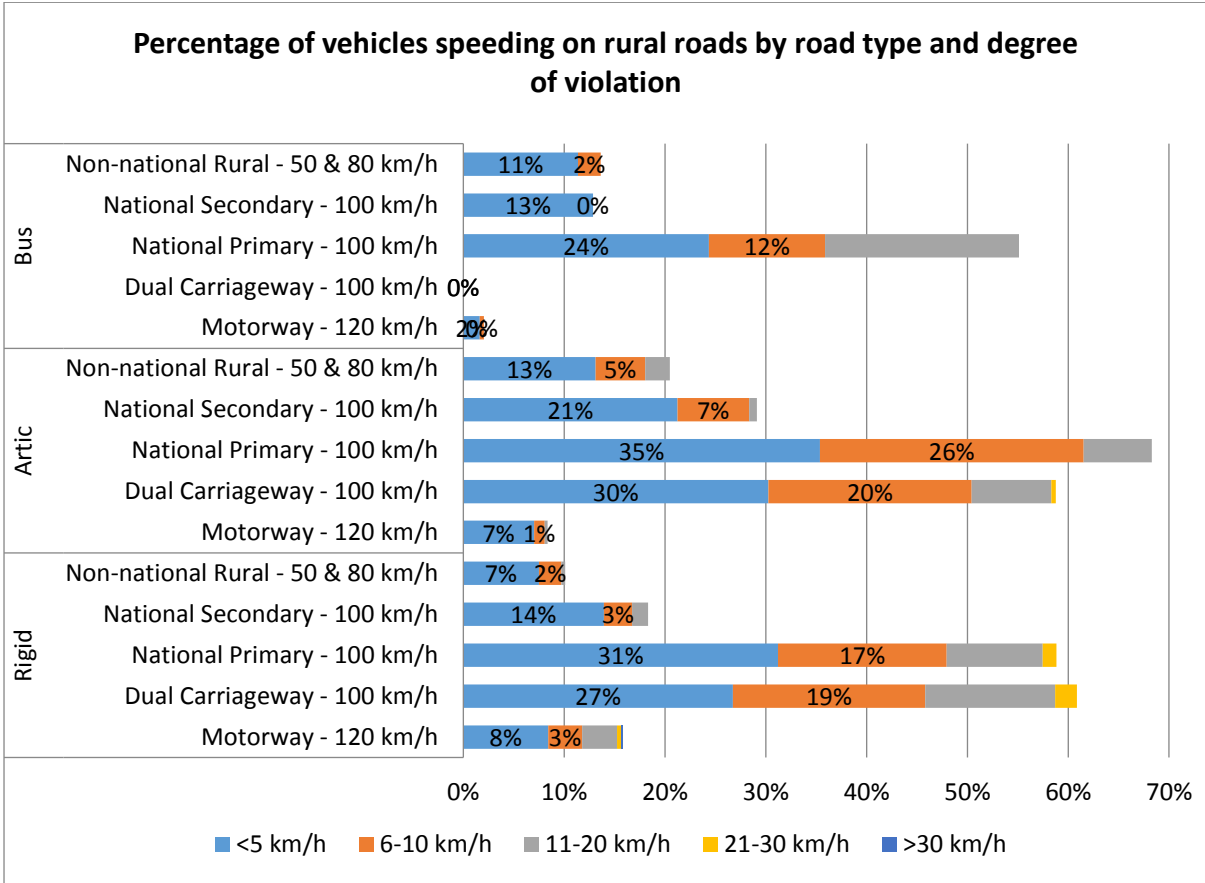




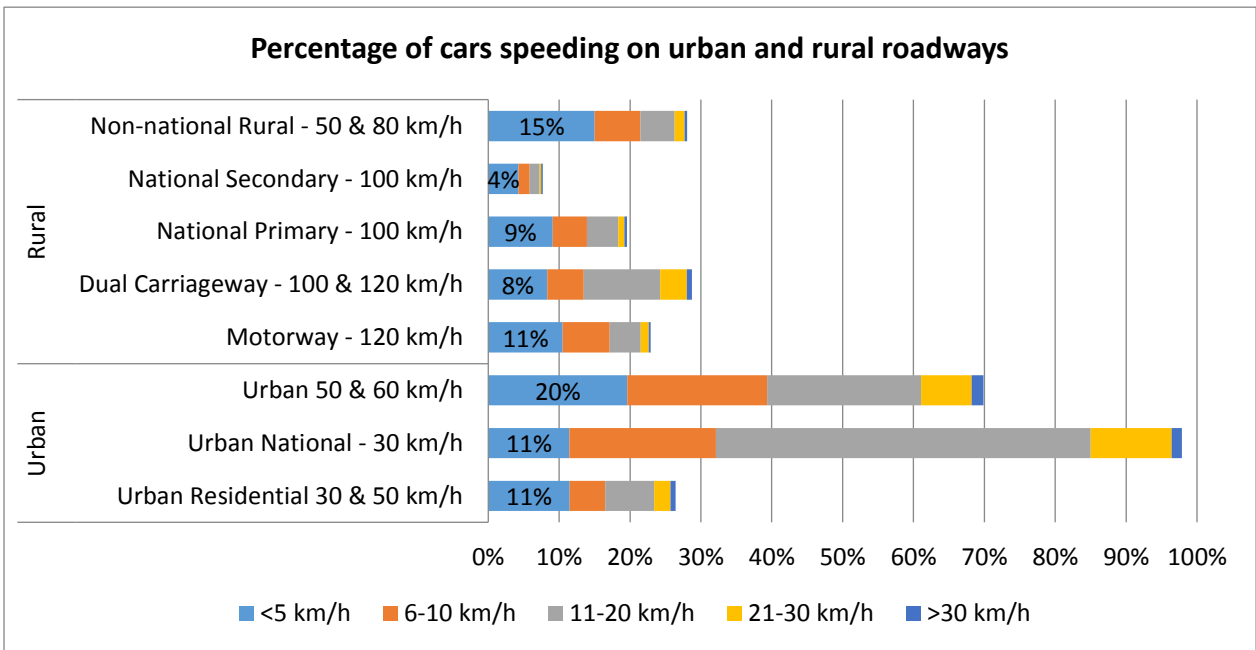
*At one Regional site the default speed limit was 50 km/h, there was 140 observations of cars and 69% of cars were travelling under the speed limit.*

#### WORST OFFENDERS

ONE DRIVER WAS TRAVELLING AT **111KM/H** ON AN 80KM/H LOCAL ROAD, WHICH IS 1.4 TIMES OVER THE SPEED LIMIT  
**36 CARS** WERE DRIVING OVER 120KM/H ON DUAL CARRIAGEWAYS WITH THE HIGHEST SPEED RECORDED AT **148KM/H**  
**2 CARS** WERE DRIVING OVER 160KM/H ON MOTORWAYS WITH THE HIGHEST SPEED RECORDED AT **165KM/H**



*Articulated trucks on National Primary Roads exceeded the speed limit by the greatest margin, with 26% travelling at 6-10km/h over the limit.*



### Who's up and who's down: Speeding by cars

Historic speeding rates for vehicles and road types can be found in the tables in appendix 2 and 3.

The following urban location changes are:

- Urban National - 30km/h decrease by 1.5%
- Urban National – 50km/h decrease by 7%
- Urban residential – 50km/h decreased by 6%
- Urban National – 60km/h increased by 6%
- Urban Arterial – 60km/h decreased by 10%
- Urban Arterial – 50km/h decreased by 2%
- Urban Residential – 30km/h increased by 4%

The following rural location changes are:

- Motorway – 120km/h increased by 2%
- Dual Carriageway – 100km/h increased by 6%
- National Primary – 100km/h decreased by 3%
- National Secondary - 100km/h increased by 1%
- Regional Roads – 80km/h decreased by 2%



## Summary & Recommendations

The Government Road Safety Strategy 2013 – 2020 sets ambitious targets for speed compliance: *'A target of 100% compliance has been set and whilst it is acknowledged it may be difficult to achieve, it is a necessary requirement to support the primary targets of fatality and serious injury reduction in this Strategy'*.

Based on the results from the 2016 Free-Speed survey, speeding is an issue on all road types, in all speed limit areas, and across all vehicle types.

However, there are certain areas that are a particular cause for concern. That is

- Speeding by all vehicle types in urban 50km/h and 60km/h areas

In the event of a collision in these situations, it is other road users (pedestrians, cyclists, motorcyclists) who are at greatest risk of injury or death.

There is a need for continued education of drivers and future drivers about the dangers of speeding in general. While education is one aspect of the drive to reduce speeding to appropriate levels, enforcement continues to play a vital role through the use of the safety camera system.



Within the **Road Safety Strategy 2013 – 2020** there are a number of actions that pertain to the improvement of speed compliance in Ireland, and work is underway in these areas:

**Actions 1&4:** These relate to the implementation of public education/awareness campaigns which target the main causal factors for collisions, including speeding, and the improvement of road users' understanding of how and why speed limits are set (RSA).

**Action 90/ Action 16 of the Speed Limit Review Report:** This relates to researching Intelligent Speed Adaption systems, based on trials and pilot studies (DTTAS/RSA)

**Action 72:** This relates to the continuation of the outsourcing of the operation of safety cameras (An Garda Síochána)

**Action 91:** Relates to legislating for, subject to legal advice, and implement the use of average speed cameras at appropriate locations (DTTAS)

**Action 114:** Relates to the conduct of annual surveys of drivers free speed (RSA)

In relation to Actions 1&4, communications campaign development should take into account the following:

- Speeding in urban areas places vulnerable road users at greater risk of injury or death;
- Speeding in rural areas puts everyone involved in the collision at greater risk of injury or death because of the higher speeds experienced.

The European Transport Safety Council(ETSC) has also made a number of recommendations to Member States about speed management, many of which are integrated into the current Road Safety Strategy. These include:

- **Enforcement:** safety cameras should be introduced, and time-over-distance cameras should be considered
- **Penalty points** for speeding should be implemented, and there should be increases in points in line with the degree of speed violation
- **Intelligent Speed Adaption:** member states are encouraged to roll out ISA nationally, and develop digital maps of speed limits
- **30km/h limits in residential areas** should be introduced, also in areas with a high volume of vulnerable road users
- There should be a maximum **50km/h speed limit** in urban areas

## Appendix 1

## Detailed Tables - Free-Speed by Road Type 2016

<i>Cars</i>						
	Sample No.	No. Speeding	% Speeding	Avg. Speed (km/h)	Percentile Free Speed	
<i>Road Type – km/h</i>					50th	85th
Urban National - 30	140	137	97.8	43	43	50
Urban National - 50	840	570	67.8	57	56	69
Urban National - 60	558	316	56.6	63	62	73
Urban Arterial - 50	1120	917	81.8	58	58	67
Urban Arterial - 60	980	641	65.4	65	65	75
Residential - 30	511	316	61.8	36	33	48
Residential - 50	1120	115	10.2	41	40	48
Motorways - 120	1400	321	22.9	113	113	124
Dual Carriageways - 100	840	286	34.0	96	95	113
Dual Carriageways - 120	280	36	12.8	107	108	118
National Primary Road - 100	1400	274	19.5	92	92	103
National Secondary Road - 100	1405	108	7.7	82	82	95
Regional Roads - 50	140	43	30.7	47	47	53
Regional Roads - 80	757	296	39.1	78	77	89
Local Roads – 80	937	176	18.7	71	71	82

<i>Articulated Trucks</i>						
	Sample No.	No. Speeding	% Speeding	Avg. Speed (km/h)	Percentile Free Speed	
<i>Road Type – km/h</i>					50th	85th
Urban National - 50	161	106	65.8	55	56	64
Urban National - 60	122	51	41.8	58	59	68
Motorways - 120	371	31	8.3	85	85	90
Dual Carriageways - 100	228	134	58.7	81	82	89
Dual Carriageways - 120	84	62	73.8	83	84	88
National Primary Road - 100	325	222	68.3	83	83	89
National Secondary Road - 100	127	0	0	76	76	85
Regional Roads - 50	11	1	9.1	46	47	50
Regional Roads - 80	67	21	31.3	76	77	84
Local Roads – 80	44	3	6.8	65	66	74

<i>Rigid Trucks</i>	Sample No.	No. Speeding	% Speeding	Avg. Speed (km/h)	Percentile Free Speed	
<i>Road Type – km/h</i>					50th	85th
Urban National - 50	269	178	66.1	56	55	66
Urban National - 60	203	80	39.4	58	58	66
Motorways - 120	688	109	15.8	86	86	91
Dual Carriageways - 100	419	255	60.8	82	82	90
Dual Carriageways - 120	163	102	62.6	83	83	92
National Primary Road - 100	442	260	58.8	81	82	89
National Secondary Road - 100	251	46	18.3	72	72	81
Regional Roads - 50	20	4	20.0	45	44	51
Regional Roads - 80	99	19	19.2	72	72	81
Local Roads – 80	148	4	2.7	63	63	71

<i>Single Decker Buses</i>	Sample No.	No. Speeding	% Speeding	Avg. Speed (km/h)	Percentile Free Speed	
<i>Road Type – km/h</i>					50th	85th
Urban National - 50	57	23	40.3	51	48	63
Urban National - 60	64	23	35.9	59	59	63
Motorways - 120	244	5	2.0	92	93	98
Dual Carriageways - 100	124	0	0	85	85	92
Dual Carriageways - 120	39	0	0	88	87	95
National Primary Road - 100	78	43	55.1	82	82	91
National Secondary Road - 100	70	9	12.8	72	72	80
Regional Roads - 50	16	4	25.0	46	45	51
Regional Roads - 80	11	2	18.2	73	74	81
Local Roads – 80	17	0	0	59	61	69

Appendix 2

Percentage speeding (Urban) 1999 to 2016

Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
<i>Urban National – 30 km/h</i>														
Car	-	-	-	-	-	-	-	-	-	-	-	-	99.3	97.8
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Urban National – 50 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	94	97	98	89	82	86	78	83	82	85	82	76	75	68
Articulated	89	92	92	89	69	74	68	77	64	78	77	63	66	66
Rigid	85	85	96	80	77	72	64	73	64	76	73	56	60	66
S.D. Buses	-	-	-	79	74	80	-	-	-	89	77	61*	44	40
Motor Cycle	-	-	-	-	88	-	-	-	-	-	100	75*	77*	60*
<i>Urban National – 60 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	-	-	-	-	-	-	-	-	-	-	61	46	51	57
Articulated	-	-	-	-	-	-	-	-	-	-	29	31*	32	42
Rigid	-	-	-	-	-	-	-	-	-	-	32	26	25	39
S.D. Buses	-	-	-	-	-	-	-	-	-	-	22	34*	39	36
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	33*	43*
<i>Urban Arterial – 50 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	99	99	86	91	86	40	70	68	77	74	81	83	84	82
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Urban Arterial – 60 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	67	82	75	80	89	32	67	67	72	62	68	70	75	65
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FREE-SPEED SURVEY 2016

<i>Urban Residential – 30 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	-	-	-	-	-	-	-	-	-	-	57	49*	58	62
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Urban Residential – 50 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	68	61	36	20	45	23	4	4	9	10	15	17	16	10
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Small sample size; S.D. Buses = Single Decker Buses

Appendix 3

Percentage Speeding (Rural) 1999 to 2016

<i>Motorway – 120 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	29	24	23	15	20	14	15	18	16	15	21	28	21	23
Articulated	81	81	85	94	89	86	91	77	86	85	81	9 <sup>^</sup>	8	8
Rigid	74	82	83	88	85	70	83	72	84	78	77	6 <sup>^</sup>	8	16
S.D. Buses	-	-	-	100	0	70	87	85	95	94	96	3	3	2
Motor Cycle	-	-	-	-	-	-	-	-	-	-	9	7*	19*	0*
<i>Dual Carriageway – 100 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	52	43	29	28	30	24	40	35	31	40	28	36	28	34
Articulated	78	70	60	87	69	54	63	69	75	74	76	80	60	59
Rigid	65	67	55	78	68	48	59	61	59	69	70	62	58	61
S.D. Buses	-	-	-	77	63	77	59	82	76	88	78	88*	70	0
Motor Cycle	-	-	-	-	-	-	-	-	-	-	18	20*	17*	66*
<i>Dual Carriageway – 120 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	-	-	-	-	-	-	-	-	-	-	-	-	5	13
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	40	74
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	44	63
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	0	0
<i>National Primary Road – 100 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	51	44	30	23	27	20	19	23	15	16	19	18	23	20
Articulated	75	74	73	83	87	64	70	67	65	70	71	75	83	68
Rigid	66	61	72	76	76	48	57	57	52	53	60	64	54	59
S.D. Buses	-	-	-	76	78	71	60	78	44	49	59	69*	71	55
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	50*	44*	50*
<i>National Secondary Road – 100 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	18	16	14	9	13	4	10	8	6	6	9	8	7	8
Articulated	19	37	34	48	58	25	49	41	31	32	37	47	33	0
Rigid	27	29	46	30	41	13	28	33	25	21	27	35	21	18
S.D. Buses	-	-	-	38	20	16	19	26	15	10	24	29*	25	13
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	67*	0	50*

FREE-SPEED SURVEY 2016

<i>Regional Roads – 80 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	-	10	8	63	16	34	34	41	33	34	36	45	41	39
Articulated	-	39	17	45	9	30	21	26	8	2	0	29*	27	31
Rigid	-	42	22	45	22	22	14	21	6	10	6	17*	11	19
S.D. Buses	-	-	-	9	0	16	0	-	0	15	-	27*	12	18
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	50*	-
<i>Regional – 50 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	-	-	-	-	-	-	-	-	-	-	-	-	-	31
Articulated	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Rigid	-	-	-	-	-	-	-	-	-	-	-	-	-	20
S.D. Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	25
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Local Roads – 80 km/h</i>														
Vehicle Class	1999	2002	2003	2005	2006	2007	2008	2009	2011	2012	2013	2014	2015	2016
Car	-	7	10	37	22	30	21	15	15	13	17		24	19
Articulated	-	-	-	-	-	10	5	2	0	0	0		10	7
Rigid	-	-	-	-	-	17	10	3	3	1	3		4	3
S.D. Buses	-	-	-	-	-	-	5	-	0	0	-		7	0
Motor Cycle	-	-	-	-	-	-	-	-	-	-	-	-	20*	20

\*Small sample size; S.D. Buses = Single Decker Buses



## Appendix 4

## Breakdown of sites by road type and speed limit, 2016

Road Type	Speed Limit km/h	Number of Sites	Number of Observations*
<i>Urban Sites</i>			
Urban national	30	1	140
Urban national	50	6	1341
Urban national	60	4	954
Arterial	50	8	1120
Arterial	60	7	980
Residential	30	4	607
Residential	50	8	1120
	<b>Total</b>	<b>38</b>	<b>6262</b>
<i>Rural Sites</i>			
Motorway	120	10	2724
Dual Carriageway	100	6	1635
Dual Carriageway	120	2	577
National Primary	100	10	2262
National Secondary	100	10	1859
Regional	50	1	187
Regional	80	6	934
Local	80	9	1151
	<b>Total</b>	<b>54</b>	<b>11329</b>

\*All vehicles

## Appendix 5

### Survey Details

The same sites were chosen as in previous surveys, where the sites were chosen according to the following criteria:

- Long, straight sections of roadway;
- Carriageway of at least seven metres (except for urban residential);
- Sites where speed is relatively unaffected by geometry, traffic, traffic lights, traffic calming measures, junctions, road works or parking;
- Sites where it is feasible to drive faster than the speed limit.

### Methodology

Nationwide Data Collection (NDC) on behalf of the Road Safety Authority carried out national surveys in relation to traffic speeds in 2016. Survey results are used to monitor trends, determine the effectiveness of safety initiatives and to inform the on-going review of public policy in relation to road safety.

The methodology developed for and used by the Road Safety Authority in all previous surveys is applied to this survey. Speed surveys are conducted annually at randomly selected sites on the Irish road network to provide an estimate of the speed at which drivers choose to travel. The target population is the entire Irish road network. There were 54 rural road sites and 38 urban road sites surveyed.

On urban arterial roads, speeds were measured between 5.30am and 7.30am. However, in some locations in Dublin, few readings of vehicles were taken after 7.00am, as the traffic conditions could not be described as free-flowing. The speed measurements on residential roads were carried out in normal daylight hours (typically between 8.30am and 5.30pm). For national roads, the speeds of cars, rigid and articulated vehicles were recorded separately.

All surveys were carried out in dry conditions. Speed was measured with calibrated radar meters. Surveyors were instructed to choose vehicles in a random manner to avoid bias. Where a cluster of vehicles arrived together, the speed of the first vehicle only was taken. Every effort was made for surveyors to be as inconspicuous as possible. Surveyors had set targets for vehicle classes. They were instructed to continue surveying until either

- a. these targets were reached or
- b. for a maximum of 2.5 hours, whichever occurred earlier.

Due to low sample sizes, no figures are provided for double decker buses and caution should be taken in the interpretation of results provided for single decker buses, as they are based on very limited sample sizes.

## Legal speed limits by vehicle type

Type of Vehicle	Built up Areas	Regional or Local Roads	Ordinary Speed limit on National Roads (Primary or Secondary)	Ordinary Speed limit on a Dual Carriageway	Ordinary Speed limit on a Motorway
Car or Motorcycle	50 km/h	80 km/h	100km/h	100 km/h	120 km/h
Bus	50 km/h	80 km/h	80 km/h	100 km/h	100 km/h
Bus (designed to carry standing passengers)	50 km/h	65 km/h	65 km/h	65 km/h	65 km/h
Truck	50 km/h	80 km/h	80 km/h	80 km/h	90 km/h

Some drivers must obey speed limits for the particular vehicles they drive. If vehicle and road speeds are different, the driver must obey the lower of the two.

Methodological note: There was change in speed limits for vehicles with a design gross weight of more than 3,500kg on motorways from 80km/h to 90km/h. This change has resulted in a large drop in the numbers of rigid and articulated vehicles recorded as speeding on motorways and should be taken into account when quoting the historic figures.

## Appendix 6

## Top 5 locations – Highest Volumes

Site No	Location	Numbers	Time period
RES07	Griffith Avenue between Grace Park Road and Malahide Road	140 cars	30 mins
ART01	R118 - Rock Road at Blackrock College	140 cars	45 mins
ART06	James Larkin Road, south of Watermill Road	140 cars	
ART08	R112 Dodder Park Road, north of Rathfarnham Road	140 cars	
ART11	R110 Naas Road between Turnpike Road and Club Road	140 cars	
ART12	Kylemore Road on the bridge	140 cars	
ART15	R107 Malahide Road slightly north of Greencastle Road	140 cars	

## Lowest 5 locations – Lowest volumes

Site No	Location	Numbers	Time period
NNL08	L1530, north of T-Junction	84 vehicles	2 hours, 30 mins
NNL04	LP999 between Sraghmore and Enniskerry at Djouce Woods	87 vehicles	
NNL02	LP111 - Outside farm entrance on eastbound side of the road	91 vehicles	
RES01	Brian Road after junction with Brian Avenue	91 vehicles	
NNR07	R499, east of Dolla and Silvermines	98 vehicles	

# Working To Save Lives

## Údarás Um Shábháilteacht Ar Bhóithre Road Safety Authority

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