## FREE SPEED STUDY Survey Report 2018

Research Department
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## 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 2018, Nationwide Data Collection conducted an observational study of 16,672 vehicles on behalf of the Road Safety Authority. The surveys took place at the roadside at 90 sites: 38 urban ( $60 \mathrm{~km} / \mathrm{h}$ or less speed limit) and 52 rural ( $80 \mathrm{~km} / \mathrm{h}$ or more speed limit). Cars ( 12,240 ), rigid goods vehicles $(2,316)$, semi-articulated vehicles ( 1,453 ), single decker buses ( 583 ), double decker buses (37) and Motorcyclists (43) were observed.

Surveys were carried out at the designated locations generally during working hours (8.30am to $5.30 \mathrm{pm})$, 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).

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 $90 \mathrm{~km} / \mathrm{h}$ on motorways with a posted speed limit of $120 \mathrm{~km} / \mathrm{h}$ (see Appendix 5).

## Key Findings:

- The percentage of car drivers breaking the speed limit on urban roads was $52 \%$ ( $57 \%$ in 2016); when residential roads are excluded, this rises to $65 \%$ ( $71 \%$ in 2016) for all other urban national roads.
- The percentage of car drivers breaking the speed limit on rural roads was $27 \%$ ( $22 \%$ in 2016).
- The percentage of cars speeding on motorways is the same as 2016-23\%.
- The percentage of cars speeding on dual carriageways - 100kph increased from 34\% in 2016 to 44\% in 2018.
- The percentage of cars speeding on regional 80km/h roads increased from 39\% in 2016 to 50\% in 2018.
- $\quad$ Average car free speed:
- $112 \mathrm{~km} / \mathrm{h}$ in $2018 /$, $113 \mathrm{~km} / \mathrm{h}$ on motorways in 2016; posted limit 120
- $100 \mathrm{~km} / \mathrm{h}$ in $2018,96 \mathrm{~km} / \mathrm{h}$ on dual carriageways in 2016; posted limit
- $61 \mathrm{~km} / \mathrm{h}$ in $2018,65 \mathrm{~km} / \mathrm{h}$ on urban arterial roads in 2016; posted limit
- $61 \mathrm{~km} / \mathrm{h}$ in 2018, $57 \mathrm{~km} / \mathrm{h}$ on urban national roads in 2016; posted limit


## Speeding on Urban Roads

Of the vehicles surveyed $89 \%(5,268)$ were cars, $6 \%(358)$ were rigid trucks, $3 \%(204)$ were articulated trucks, and $2 \%(93)$ were buses were on urban roads.

- $52 \%$ of all cars observed on all urban roads were speeding ( $57 \%$ in 2016);
- $58 \%$ of all rigid trucks observed on all urban roads were speeding ( $55 \%$ in 2016);
- $72 \%$ of all articulated trucks observed on all urban roads were speeding ( $55 \%$ in 2016);
$-68 \%$ of all single decker buses observed on all urban roads were speeding ( $38 \%$ in 2016).


At the Urban National $30 \mathrm{~km} / \mathrm{h}$ location, only 3 out of the 140 cars sampled was travelling at or under the $30 \mathrm{~km} / \mathrm{h}$ speed limit.
At one of the Urban Residential locations, a vehicle was recorded travelling at $67 \mathrm{~km} / \mathrm{h}$.


## Speeding on Rural Roads

$65 \%(6,972)$ of cars, $18 \%(1,958)$ were rigid trucks, $12 \%(1,249)$ were articulated trucks, and $5 \%(489)$ were buses surveyed were on rural roads.

- $27 \%$ of all cars observed on all rural roads were speeding ( $22 \%$ in 2016);
- 41\% of all rigid trucks observed on all rural roads were speeding (36\% in 2016);
- 44\% of all articulated trucks observed on all rural roads were speeding ( $38 \%$ in 2016);
- $3 \%$ of all single decker buses observed on all rural roads were speeding (11\% in 2016).



At one Regional site the default speed limit was $50 \mathrm{~km} / \mathrm{h}$, there was 140 observations of cars and $49 \%$ of cars were travelling under the speed limit.

## WORST OFFENDERS

ONE DRIVER WAS TRAVELLING AT 118KM/H ON AN 80KM/H LOCAL ROAD, WHICH IS 1.5 TIMES OVER THE SPEED LIMIT
30 CARS WERE DRIVING OVER 120KM/H ON DUAL CARRIAGEWAYS 100KM/H WITH THE HIGHEST SPEED RECORDED AT 147KM/H 4 CARS WERE DRIVING OVER 150KM/H ON MOTORWAYS/DUAL CARRIAGEWAY 120KM/H WITH THE HIGHEST SPEED RECORDED AT 168KM/H


Articulated trucks on Dual Carriageways exceeded the speed limit by the greatest margin, with $21 \%$ travelling at $11-20 \mathrm{~km} / \mathrm{h}$ 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 Appendices 2 and 3 .
The following urban location changes are:

- Urban National - 30km/h is the same as 2016
- Urban National - $50 \mathrm{~km} / \mathrm{h}$ increase by $13 \%$
- Urban residential $-50 \mathrm{~km} / \mathrm{h}$ decreased by $5 \%$
- Urban National - $60 \mathrm{~km} / \mathrm{h}$ increased by $13 \%$
- Urban Arterial - 60km/h decreased by $16 \%$
- Urban Arterial - $50 \mathrm{~km} / \mathrm{h}$ decreased by $22 \%$
- Urban Residential - 30km/h increased by 5\%

The following rural location changes are:

- Motorway $-120 \mathrm{~km} / \mathrm{h}$ is the same as 2016
- Dual Carriageway $-100 \mathrm{~km} / \mathrm{h}$ increased by $10 \%$
- National Primary - 100km/h increased by $9 \%$
- National Secondary - 100km/h increased by $1 \%$
- Regional Roads - $80 \mathrm{~km} / \mathrm{h}$ increased by $11 \%$


## 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 2018 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

- Drivers in urban $50 \mathrm{~km} / \mathrm{h}$ and $60 \mathrm{~km} / \mathrm{h}$ areas and
- Larger vehicles (trucks and buses) on rural $100 \mathrm{~km} / \mathrm{h}$ roads

In the event of a collision in these situations, it is other road users (pedestrians, cyclists, motorcyclists, and other drivers) 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 ofpublic 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.

During a Mid-Term Evaluation of the Strategy conducted in 2016 it was acknowledged that focus must be on the main killer behaviours, i.e. the behaviours that have been proven to contribute to fatal collisions on our roads, of which speeding is one. Reducing the number of collisions and casualties caused by these killer behaviours is the single most important means for Ireland to achieve the target on fatalities by 2020.

Interventions to address these killer behaviours must be further developed and enhanced, in particular targeted visible enforcement and harsher penalties for non-compliance. There was universal agreement that resources must be found to equip An Garda Síochána to provide the necessary level of targeted and visible enforcement to reduce the incidence of speeding, drinkdriving, non-seat belt wearing and mobile phone use while driving.

To this end 22 new actions were included, actions 3 and 10 relate to speeding in particular:
3 Recommend that penalties for the following offences be increased: speeding, mobile phone use, non-wearing of seat belts, carrying unrestrained children in a vehicle

10 Review the feasibility of extending the number of $30-\mathrm{km} / \mathrm{h}$ speed limit zones in vulnerable road user (VRU) rich locations (urban city/town centres), in consultation with UK experts on best|practice models in place in the UK and internationally

The European Transport Safety Council(ETSC) has also made a number of recommendations to Member Statesabout 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
- $30 \mathrm{~km} / \mathrm{h}$ limits in residential areas should be introduced, also in areas with a high volume of vulnerable road users
- There should be a maximum $50 \mathrm{~km} / \mathrm{h}$ speed limit in urban areas.


## Appendix 1

## Detailed Tables - Free-Speed by Road Type 2018

| Cars | Sample No. | No. Speeding | \% Speeding | Avg. Speed (km/h) | Percentile Free Speed |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Road Type - km/h |  |  |  |  | 50th | 85th |
| Urban National - 30 | 140 | 137 | 98\% | 46 | 46 | 54 |
| Urban National - 50 | 980 | 789 | 81\% | 61 | 61 | 74 |
| Urban National - 60 | 420 | 294 | 70\% | 69 | 67 | 85 |
| Urban Arterial - 50 | 980 | 584 | 60\% | 54 | 53 | 66 |
| Urban Arterial - 60 | 1120 | 549 | 49\% | 61 | 59 | 72 |
| Residential - 30 | 508 | 340 | 70\% | 37 | 38 | 48 |
| Residential - 50 | 1120 | 57 | 5\% | 36 | 37 | 47 |
| Motorways - 120 | 1120 | 252 | 23\% | 112 | 112 | 123 |
| Dual Carriageways - 100 | 700 | 308 | 44\% | 100 | 99 | 111 |
| Dual Carriageways - 120 | 420 | 53 | 13\% | 108 | 109 | 120 |
| National Primary Road - 100 | 1400 | 407 | 29\% | 95 | 95 | 105 |
| National Secondary Road - 100 | 1364 | 117 | 9\% | 84 | 84 | 96 |
| Regional Roads - 50 | 140 | 69 | 49\% | 50 | 50 | 56 |
| Regional Roads - 80 | 757 | 376 | 50\% | 80 | 80 | 92 |
| Local Roads - 50 | 140 | 93 | 66\% | 54 | 54 | 61 |
| Local Roads - 80 | 931 | 198 | 21\% | 72 | 72 | 83 |


| Articulated Trucks | Sample <br> No. | No. <br> Speeding | $\%$ <br> Speeding | Avg. <br> Speed <br> $(\mathrm{km} / \mathrm{h})$ | Percentile <br> Free Speed |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Road Type - $\mathrm{km} / \mathrm{h}$ | 134 | 97 | $72 \%$ | 55 | 54 | 62 |
| Urban National -50 | 70 | 49 | $70 \%$ | 70 | 74 | 84 |
| Urban National -60 | 334 | 28 | $8 \%$ | 83 | 85 | 90 |
| Motorways - 120 (90) | 164 | 144 | $88 \%$ | 86 | 86 | 91 |
| Dual Carriageways -100 (80) | 164 | 18 | $11 \%$ | 86 | 86 | 90 |
| Dual Carriageways -120 (90) | 349 | 284 | $81 \%$ | 84 | 85 | 88 |
| National Primary Road -100 (80) | 125 | 49 | $39 \%$ | 77 | 80 | 86 |
| National Secondary Road -100 (80) | 12 | 0 | $0 \%$ | 44 | 45 | 48 |
| Regional Roads -50 | 7 | 0 | $37 \%$ | 78 | 79 | 86 |
| Regional Roads -80 | 60 | 22 | 37 |  |  |  |
| Local Roads -50 | 12 | 0 | $0 \%$ | 44 | 44 | 48 |


| Rigid Trucks | Sample <br> No. | No. Speeding | \% Speeding | Avg. Speed (km/h) | Percentile Free Speed |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Road Type - km/h |  |  |  |  | 50th | 85th |
| Urban National - 50 | 284 | 156 | 55\% | 51 | 51 | 59 |
| Urban National - 60 | 74 | 50 | 68\% | 66 | 66 | 77 |
| Motorways - 120 (90) | 535 | 86 | 16\% | 84 | 85 | 91 |
| Dual Carriageways - 100 (80) | 292 | 232 | 79\% | 85 | 85 | 91 |
| Dual Carriageways - 120 (90) | 274 | 87 | 32\% | 89 | 86 | 101 |
| National Primary Road - 100 (80) | 412 | 308 | 75\% | 83 | 84 | 89 |
| National Secondary Road - 100 (80) | 215 | 62 | 29\% | 74 | 75 | 86 |
| Regional Roads - 50 | 14 | 2 | 14\% | 46 | 46 | 50 |
| Regional Roads - 80 | 85 | 15 | 18\% | 74 | 74 | 81 |
| Local Roads - 50 | 45 | 5 | 11\% | 45 | 45 | 49 |


| Single Decker Buses | Sample <br> No. | No. Speeding | \% Speeding | Avg. <br> Speed (km/h) | Percentile <br> Free Speed |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Road Type - km/h |  |  |  |  | 50th | 85th |
| Urban National - 50 | 60 | 35 | 58\% | 55 | 53 | 67 |
| Urban National - 60 | 33 | 28 | 85\% | 73 | 76 | 82 |
| Motorways - 120 (100) | 169 | 6 | 4\% | 91 | 93 | 99 |
| Dual Carriageways - 100 | 115 | 5 | 4\% | 90 | 90 | 98 |
| Dual Carriageways - 120 (100) | 47 | 2 | 4\% | 89 | 90 | 98 |
| National Primary Road - 100 | 60 | 0 | 0\% | 86 | 87 | 94 |
| National Secondary Road - 100 | 64 | 0 | 0\% | 74 | 76 | 82 |
| Regional Roads - 50 | 8 | 0 | 0\% | 46 | 47 | 49 |
| Regional Roads - 80 | 16 | 4 | 25\% | 73 | 71 | 81 |
| Local Roads - 80 | 10 | 0 | 0\% | 60 | 61 | 76 |

## Appendix 2

Percentage speeding (Urban) 1999 to 2018
Urban National - $30 \mathrm{~km} / \mathrm{h}$

| Vehicle <br> Class | $\begin{aligned} & 199 \\ & 9 \end{aligned}$ | $\begin{aligned} & 200 \\ & 2 \end{aligned}$ | $\begin{aligned} & 200 \\ & 3 \end{aligned}$ | $\begin{aligned} & 200 \\ & 5 \end{aligned}$ | $\begin{array}{\|l\|} \hline 200 \\ 6 \end{array}$ | $\begin{aligned} & 200 \\ & 7 \end{aligned}$ | $\begin{array}{\|l\|} \hline 200 \\ 8 \end{array}$ | $\begin{aligned} & 200 \\ & 9 \end{aligned}$ | $\begin{aligned} & \hline 201 \\ & 1 \end{aligned}$ | $\begin{aligned} & 201 \\ & 2 \end{aligned}$ | $\begin{aligned} & 201 \\ & 3 \end{aligned}$ | $\begin{aligned} & 201 \\ & 4 \end{aligned}$ | $\begin{aligned} & 201 \\ & 5 \end{aligned}$ | $\begin{aligned} & 201 \\ & 6 \end{aligned}$ | $\begin{aligned} & 201 \\ & 8 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | - | - | - | - | - | - | - | - | - | - | - | - | 99.3 | 97.8 | 97.8 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Urban National - $50 \mathrm{~km} / \mathrm{h}$

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :--- |
| Car | 94 | 97 | 98 | 89 | 82 | 86 | 78 | 83 | 82 | 85 | 82 | 76 | 75 | 68 | 80.5 |
| Articulate <br> d | 89 | 92 | 92 | 89 | 69 | 74 | 68 | 77 | 64 | 78 | 77 | 63 | 66 | 66 | 72.4 |
| Rigid | 85 | 85 | 96 | 80 | 77 | 72 | 64 | 73 | 64 | 76 | 73 | 56 | 60 | 66 | 54.9 |
| S.D.Buses | - | - | - | 79 | 74 | 80 | - | - | - | 89 | 77 | $61^{*}$ | 44 | 40 | 58.3 |
| Motor <br> Cycle | - | - | - | - | 88 | - | - | - | - | - | 100 | $75^{*}$ | $77^{*}$ | 60 | $100^{*}$ |

Urban National - $60 \mathrm{~km} / \mathrm{h}$

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Car | - | - | - | - | - | - | - | - | - | - | 61 | 46 | 51 | 57 | 70 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | 29 | $31^{*}$ | 32 | 42 | 70 |
| Rigid | - | - | - | - | - | - | - | - | - | - | 32 | 26 | 25 | 39 | 68 |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | 22 | $34^{*}$ | 39 | 36 | 85 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | $33^{*}$ | $43^{*}$ | - |

Urban Arterial - 50km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | 99 | 99 | 86 | 91 | 86 | 40 | 70 | 68 | 77 | 74 | 81 | 83 | 84 | 82 | 60 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Urban Arterial - 60km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | 67 | 82 | 75 | 80 | 89 | 32 | 67 | 67 | 72 | 62 | 68 | 70 | 75 | 65 | 49 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Urban Residential - 30km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | - | - | - | - | - | - | - | - | - | - | 57 | $49^{*}$ | 58 | 62 | 67 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Urban Residential - 50km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Car | 68 | 61 | 36 | 20 | 45 | 23 | 4 | 4 | 9 | 10 | 15 | 17 | 16 | 10 | 5 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

## Appendix 3

Percentage Speeding (Rural) 1999 to 2018
Motorway - $120 \mathrm{~km} / \mathrm{h}$

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | 29 | 24 | 23 | 15 | 20 | 14 | 15 | 18 | 16 | 15 | 21 | 28 | 21 | 23 | 23 |
| Articulate <br> d | 81 | 81 | 85 | 94 | 89 | 86 | 91 | 77 | 86 | 85 | 81 | $9 \wedge$ | 8 | 8 | 8 |
| Rigid | 74 | 82 | 83 | 88 | 85 | 70 | 83 | 72 | 84 | 78 | 77 | $6^{\wedge}$ | 8 | 16 | 16 |
| S.D.Buses | - | - | - | 100 | 0 | 70 | 87 | 85 | 95 | 94 | 96 | 3 | 3 | 2 | 4 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | 9 | $7^{*}$ | $19^{*}$ | $0^{*}$ | $25^{*}$ |

Dual Carriageway - 120km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 13 | 13 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 74 | 11 |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | 44 | 63 | 32 |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 0 | 4 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 0 | $33^{*}$ |

Dual Carriageway - 100km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | 52 | 43 | 29 | 28 | 30 | 24 | 40 | 35 | 31 | 40 | 28 | 36 | 28 | 34 | 44 |
| Articulate <br> d | 78 | 70 | 60 | 87 | 69 | 54 | 63 | 69 | 75 | 74 | 76 | 80 | 60 | 59 | 88 |
| Rigid | 65 | 67 | 55 | 78 | 68 | 48 | 59 | 61 | 59 | 69 | 70 | 62 | 58 | 61 | 79 |
| S.D.Buses | - | - | - | 77 | 63 | 77 | 59 | 82 | 76 | 88 | 78 | $88^{*}$ | 70 | 0 | 4 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | 18 | $20^{*}$ | $17^{*}$ | $66^{*}$ | $100^{*}$ |

National Primary - 100km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | 51 | 44 | 30 | 23 | 27 | 20 | 19 | 23 | 15 | 16 | 19 | 18 | 23 | 20 | 29 |
| Articulate <br> d | 75 | 74 | 73 | 83 | 87 | 64 | 70 | 67 | 65 | 70 | 71 | 75 | 83 | 68 | 81 |
| Rigid | 66 | 61 | 72 | 76 | 76 | 48 | 57 | 57 | 52 | 53 | 60 | 64 | 54 | 59 | 75 |
| S.D.Buses | - | - | - | 76 | 78 | 71 | 60 | 78 | 44 | 49 | 59 | $69^{*}$ | 71 | 55 | 0 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | $50^{*}$ | $44^{*}$ | $50^{*}$ | $29^{*}$ |

National Secondary - 100km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | 18 | 16 | 14 | 9 | 13 | 4 | 10 | 8 | 6 | 6 | 9 | 8 | 7 | 8 | 9 |
| Articulate <br> d | 19 | 37 | 34 | 48 | 58 | 25 | 49 | 41 | 31 | 32 | 37 | 47 | 33 | 0 | 39 |
| Rigid | 27 | 29 | 46 | 30 | 41 | 13 | 28 | 33 | 25 | 21 | 27 | 35 | 21 | 18 | 29 |
| S.D.Buses | - | - | - | 38 | 20 | 16 | 19 | 26 | 15 | 10 | 24 | $29^{*}$ | 25 | 13 | 0 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | $67^{*}$ | 0 | $50^{*}$ | $50^{*}$ |

Regional Road - 80km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | - | 10 | 8 | 63 | 16 | 34 | 34 | 41 | 33 | 34 | 36 | 45 | 41 | 39 | 50 |
| Articulate <br> d | - | 39 | 17 | 45 | 9 | 30 | 21 | 26 | 8 | 2 | 0 | $29^{*}$ | 27 | 31 | 37 |
| Rigid | - | 42 | 22 | 45 | 22 | 22 | 14 | 21 | 6 | 10 | 6 | $17^{*}$ | 11 | 19 | 18 |
| S.D.Buses | - | - | - | 9 | 0 | 16 | 0 | - | 0 | 15 | - | $27^{*}$ | 12 | 18 | 25 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | $50^{*}$ | - | - |

Regional Road - $50 \mathrm{~km} / \mathrm{h}$

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Car | - | - | - | - | - | - | - | - | - | - | - | - | - | 31 | 49 |
| Articulate <br> d | - | - | - | - | - | - | - | - | - | - | - | - | - | 9 | 0 |
| Rigid | - | - | - | - | - | - | - | - | - | - | - | - | - | 20 | 14 |
| S.D.Buses | - | - | - | - | - | - | - | - | - | - | - | - | - | 25 | 0 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | $100^{*}$ |

Local Road - 80km/h

| Vehicle <br> Class | 199 <br> 9 | 200 <br> 2 | 200 <br> 3 | 200 <br> 5 | 200 <br> 6 | 200 <br> 7 | 200 <br> 8 | 200 <br> 9 | 201 <br> 1 | 201 <br> 2 | 201 <br> 3 | 201 <br> 4 | 201 <br> 5 | 201 <br> 6 | 201 <br> 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Car | - | 7 | 10 | 37 | 22 | 30 | 21 | 15 | 15 | 13 | 17 |  | 24 | 19 | 21 |
| Articulate <br> d | - | - | - | - | - | 10 | 5 | 2 | 0 | 0 | 0 |  | 10 | 7 | 3 |
| Rigid | - | - | - | - | - | 17 | 10 | 3 | 3 | 1 | 3 |  | 4 | 3 | 12 |
| S.D.Buses | - | - | - | - | - | - | 5 | - | 0 | 0 | - |  | 7 | 0 | 0 |
| Motor <br> Cycle | - | - | - | - | - | - | - | - | - | - | - | - | $20^{*}$ | 20 | $50^{*}$ |

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

## Appendix 4

Breakdown of sites by road type and speed limit, 2018

| Road Type | Speed Limit <br> $\mathrm{km} / \mathrm{h}$ | Number of <br> Sites | Number of <br> Observations* |
| :--- | :---: | :---: | :---: |
| Urban Sites | 30 | 1 | 140 |
| Urban national | 50 | 7 | 1465 |
| Urban national | 60 | 3 | 597 |
| Urban national | 50 | 7 | 980 |
| Arterial | 60 | 8 | 1120 |
| Arterial | 30 | 4 | 508 |
| Residential | 50 | 8 | 1120 |
| Residential | Total | 38 | 5930 |
|  | 120 |  |  |
| Rural Sites | 100 | 5 | 2189 |
| Motorway | 120 | 3 | 1282 |
| Dual Carriageway | 100 | 10 | 916 |
| Dual Carriageway | 100 | 10 | 2235 |
| National Primary | 50 | 1 | 1770 |
| National Secondary | 80 | 6 | 170 |
| Regional | 50 | 1 | 918 |
| Regional | 80 | 8 | 199 |
| Local | Total | 52 | 1063 |
| Local |  |  | 10742 |
|  |  |  |  |

*All vehicles
** Unable to survey two motorway sites due to on-going roadworks.

## 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 2018. 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 52 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 all other roads were generally 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 <br> up <br> Areas | Regional <br> or Local <br> Roads | Ordinary Speed <br> limit on National <br> Roads (Primary or <br> Secondary) | Ordinary <br> Speed limit <br> on a Dual <br> Carriageway | Ordinary <br> Speed limit <br> on a <br> Motorway |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Car or Motorcycle | 50 <br> $\mathrm{~km} / \mathrm{h}$ | $80 \mathrm{~km} / \mathrm{h}$ | $100 \mathrm{Km} / \mathrm{h}$ | $100 \mathrm{~km} / \mathrm{h}$ | $120 \mathrm{~km} / \mathrm{h}$ |
| Bus | 50 <br> $\mathrm{~km} / \mathrm{h}$ | $80 \mathrm{~km} / \mathrm{h}$ | $80 \mathrm{~km} / \mathrm{h}$ | $100 \mathrm{~km} / \mathrm{h}$ | $100 \mathrm{~km} / \mathrm{h}$ |
| Bus (designed to <br> carry standing <br> passengers) | 50 <br> $\mathrm{~km} / \mathrm{h}$ | $65 \mathrm{~km} / \mathrm{h}$ | $65 \mathrm{~km} / \mathrm{h}$ | $65 \mathrm{~km} / \mathrm{h}$ | $65 \mathrm{~km} / \mathrm{h}$ |
| Truck | 50 <br> $\mathrm{~km} / \mathrm{h}$ | $80 \mathrm{~km} / \mathrm{h}$ | $80 \mathrm{~km} / \mathrm{h}$ | $80 \mathrm{~km} / \mathrm{h}$ | $90 \mathrm{~km} / \mathrm{h}$ |

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.

## Appendix 6

Top 9 locations - Highest Volumes

| Site No | Location | Numbers | Time period |
| :---: | :---: | :---: | :---: |
| DCR06 | N18 - East of R462 junction | 140 cars | 30 mins |
| ART02 | N11-Morehampton Road, Outsdie Sachs Hotel | 140 cars | 45 mins |
| ART08 | R112 Dodder Park Road, north of Rathfarnham Road | 140 cars |  |
| ART14 | N11 Stillorgan Road, Flyover at Belfield | 140 cars |  |
| DCR01 | N18 - West of R462 junction adjacent to westbound carriageway | 140 cars |  |
| DCR07 | N18 - West of R462 junction adjacent to eastbound carriageway | 140 cars |  |
| NNU02 | R600-Ballinphelic to Fivemilebridge | 140 cars |  |
| NPR06 | N22, east of R590/N22 junction | 140 cars |  |
| NSU05 | N69, east side of Listowel Town | 140 cars |  |

Lowest 5 locations - Lowest volumes

| Site <br> No | Location | Numbers | Time period |
| :---: | :---: | :---: | :---: |
| NNL08 | L1530, north of T-Junction | 62 Vehicles | 2 hours, 30 mins |
| NNR07 | R499, east of Dolla and Silvermines | 68 Vehicles |  |
| RES01 | Brian Road after junction with Brian Avenue | 88 Vehicles |  |
| NNL02 | LP111 - Outside farm entrance on eastbound side of the road | 90 Vehicles |  |
| NNLO4 | LP999 between Sraghmore and Enniskerry at Djouce Woods | 100 Vehicles |  |



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