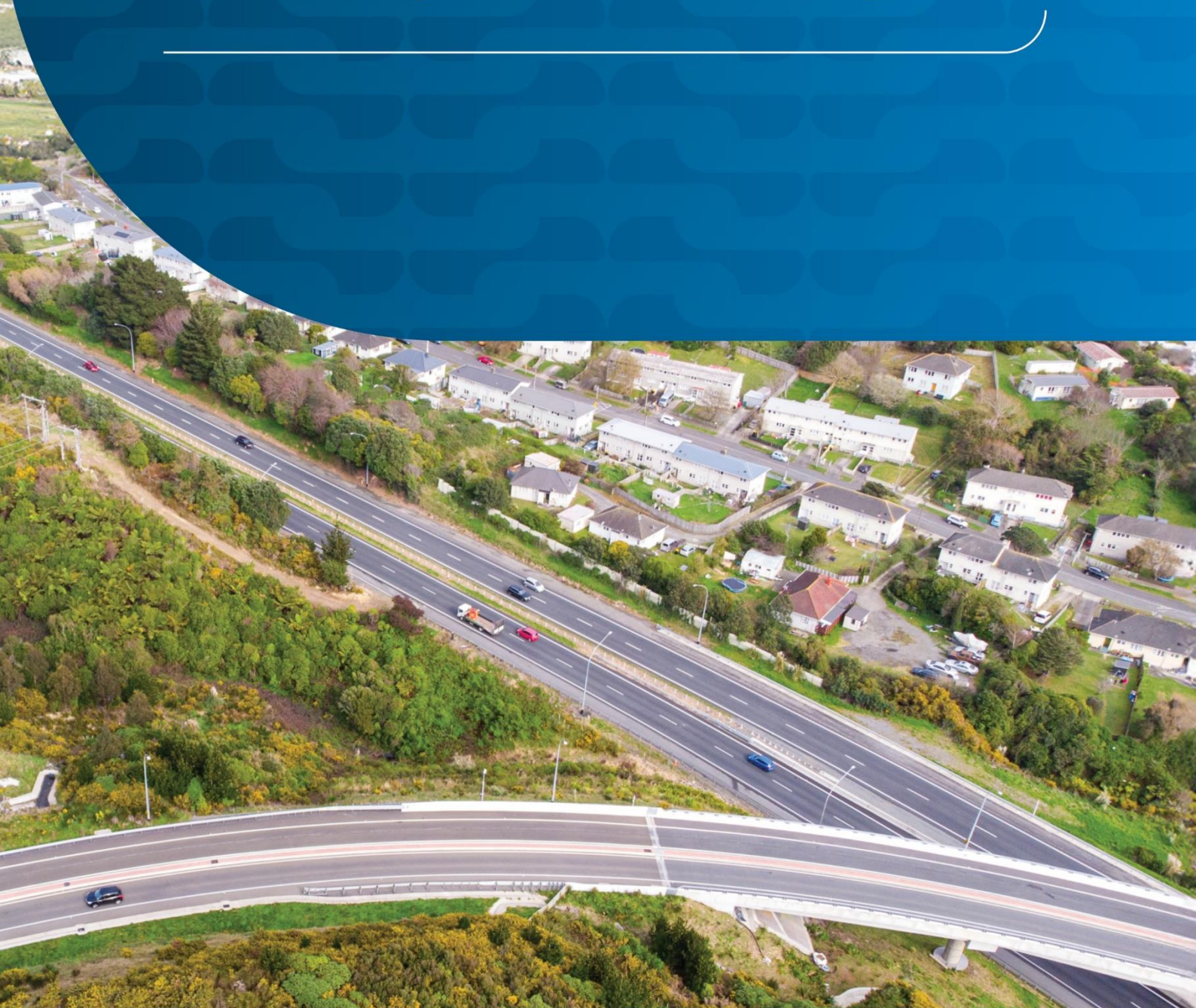


# 2024 National speed survey summary

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## Purpose

This report summarises the results of the national speed survey for 2024 of vehicle speeds across New Zealand. The results from the August 2024 survey are presented, along with trends over time across multiple previous years. There is no further discussion of the results or the statistical significance of trends.

## Background to the annual speed surveys

The annual speed surveys are designed to monitor changes in vehicle operating speeds in both open road (default 100 km/h) speed limit areas and main urban road (default 50 km/h) areas. Monitoring vehicle operating speeds across the road network provides a measure of how drivers are travelling around the network. This provides information on the effectiveness of speed management measures implemented over time and provides information for developing safety policies.

National speed monitoring surveys have been carried out since 1996. Speed surveys are conducted at selected sites around New Zealand annually to provide an estimate of the national speed profile. Prior to 2015, vehicle speeds were measured by a surveyor, targeting the same time of day and day of the week each year. Since 2018, vehicle speeds have been collected from TomTom, which ensures speeds measured are unaffected by survey procedures. Efforts have been taken to create survey sites in TomTom which correspond to the those from the previous period (1996 to 2015).

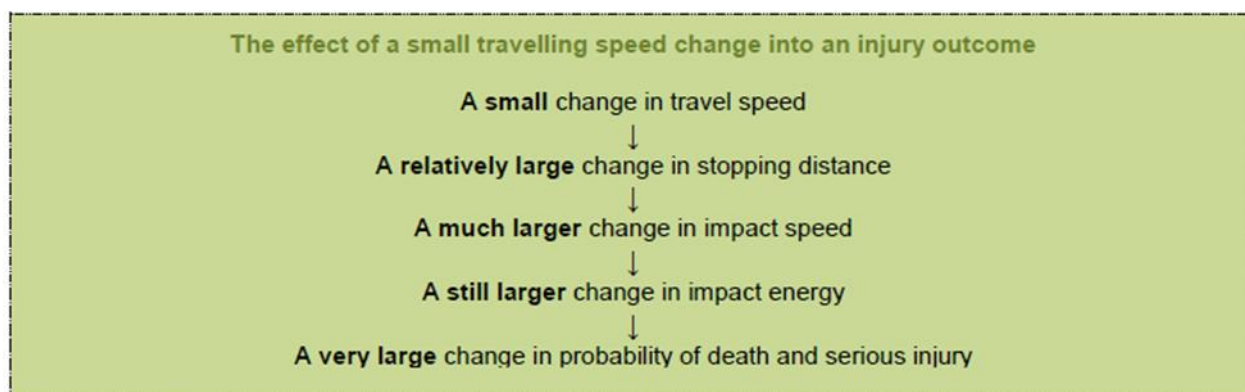
**Note:** the current (2018 to 2024) methodology is different to the previous (1996 to 2015) speed surveys. Although tabulations and visualisations in this report include findings from the earlier (1996 to 2015) speed surveys, the trendlines for the two different methodologies cannot be directly compared. For more information on the two different methodologies (1996 to 2015) and (2018 to 2024), refer to Appendix A and B respectively.

Most sites in the latest survey correspond closely to previous spot-survey sites and time of year in the Ministry of Transport's annual winter speed surveys, which were conducted until 2015. Some sites have had to be changed, or removed, because the speed limits at the original sites had been changed.

National surveys include 53 open road (100 km/h) and 64 urban road (50 km/h) sites across state highways and local roads, which are surveyed over the first 28 days of August each year.

The speed survey results have also been broken down to a regional level. The regional surveys are designed to track changes over time in driver speed choice within regions; they are **not** designed to provide valid comparisons between regions. To obtain valid comparisons between regions the set of sites used in each region would need to be comparable in every way.

National speed profiles provide an indication of safety on New Zealand's roads, with a particular focus on whether trends are generally increasing or decreasing each year. Research has shown a clear link between vehicle speeds and road crashes. Even small reductions in travelling speed can have large effects on injury outcomes as injury outcomes are largely dependent on kinetic energy.



# National Speed survey results

Table 1: Summary of the national speed survey 2024 results

|             | No. of sites | Mean speed | 85 <sup>th</sup> percentile speed* | % exceeding speed limit |
|-------------|--------------|------------|------------------------------------|-------------------------|
| Open Roads  | 53           | 90.7       | 101                                | 17%                     |
| Urban Roads | 64           | 40.0       | 51.2                               | 20%                     |

## Open roads (default 100 km/h)

Table 2: Summary of annual vehicle speeds on open roads (default 100 km/h)

| Method                               | Year | Mean speed (km/h) | 85 <sup>th</sup> percentile speed* (km/h) | Percent exceeding 100 km/h |
|--------------------------------------|------|-------------------|---|----------------------------|
| (1996 to 2015)<br>car speeds         | 1996 | 102.3             | 115                                       | 56%                        |
|                                      | 1997 | 101.6             | 113                                       | 54%                        |
|                                      | 1998 | 102.2             | 113                                       | 57%                        |
|                                      | 1999 | 101.8             | 112                                       | 56%                        |
|                                      | 2000 | 101.4             | 111                                       | 52%                        |
|                                      | 2001 | 100.2             | 109                                       | 47%                        |
|                                      | 2002 | 99.1              | 107                                       | 43%                        |
|                                      | 2003 | 98.0              | 105                                       | 39%                        |
|                                      | 2004 | 97.8              | 105                                       | 39%                        |
|                                      | 2005 | 97.1              | 104                                       | 36%                        |
|                                      | 2006 | 96.4              | 103                                       | 32%                        |
|                                      | 2007 | 96.3              | 103                                       | 29%                        |
|                                      | 2008 | 96.6              | 103                                       | 30%                        |
|                                      | 2009 | 96.3              | 103                                       | 29%                        |
|                                      | 2010 | 96.2              | 103                                       | 29%                        |
|                                      | 2011 | 96.5              | 103                                       | 31%                        |
|                                      | 2012 | 95.6              | 102                                       | 25%                        |
|                                      | 2013 | 95.7              | 102                                       | 25%                        |
|                                      | 2014 | 95.3              | 101                                       | 22%                        |
|                                      | 2015 | 95.7              | 101                                       | 23%                        |
| ...                                  |      |                   |   |                            |
| (2018 to 2024)<br>all vehicle speeds | 2018 | 92.3              | 102                                       | 24%                        |
|                                      | 2019 | 92.7              | 102                                       | 24%                        |
|                                      | 2020 | 93.0              | 102                                       | 23%                        |
|                                      | 2021 | 91.9              | 102                                       | 22%                        |
|                                      | 2022 | 91.5              | 102                                       | 22%                        |
|                                      | 2023 | 91.9              | 102                                       | 21%                        |
|                                      | 2024 | 90.7              | 101                                       | 17%                        |

\* 85<sup>th</sup> percentile means 15% of vehicles were travelling faster than this speed.

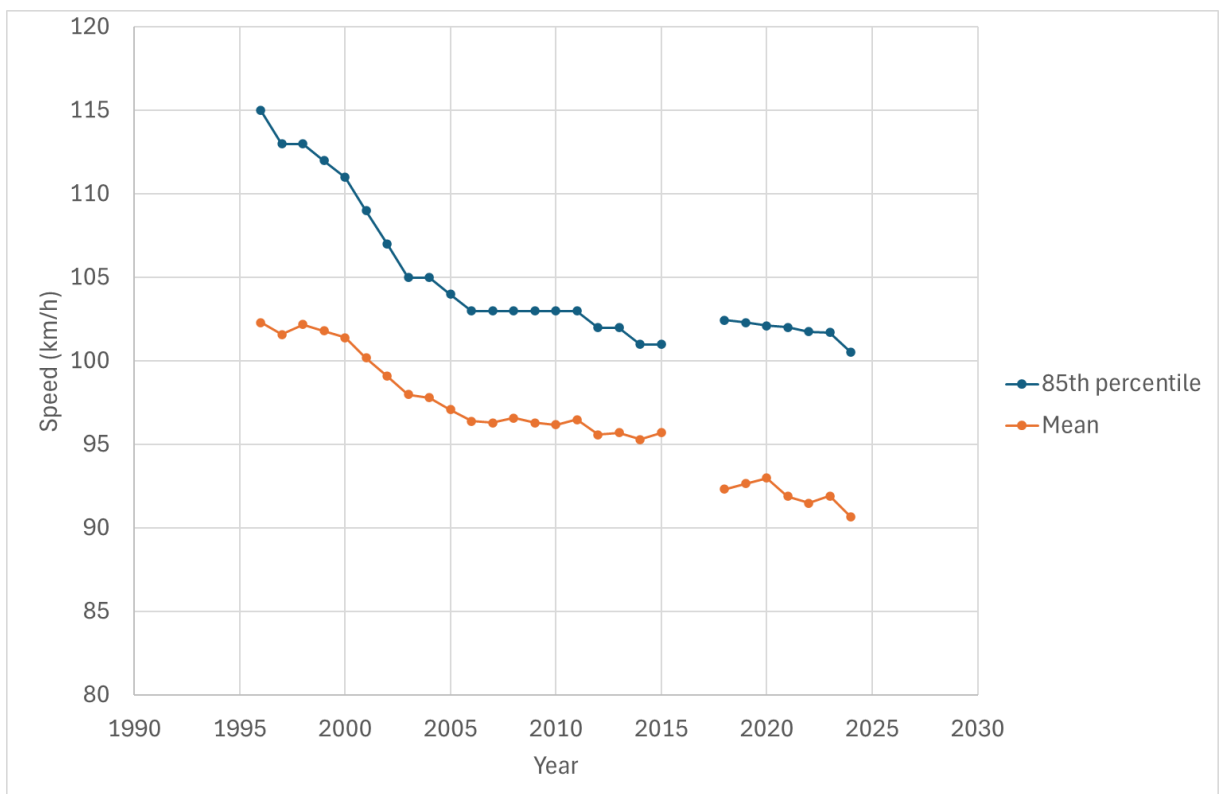


Figure 1: Open roads (default 100 km/h) annual speed results

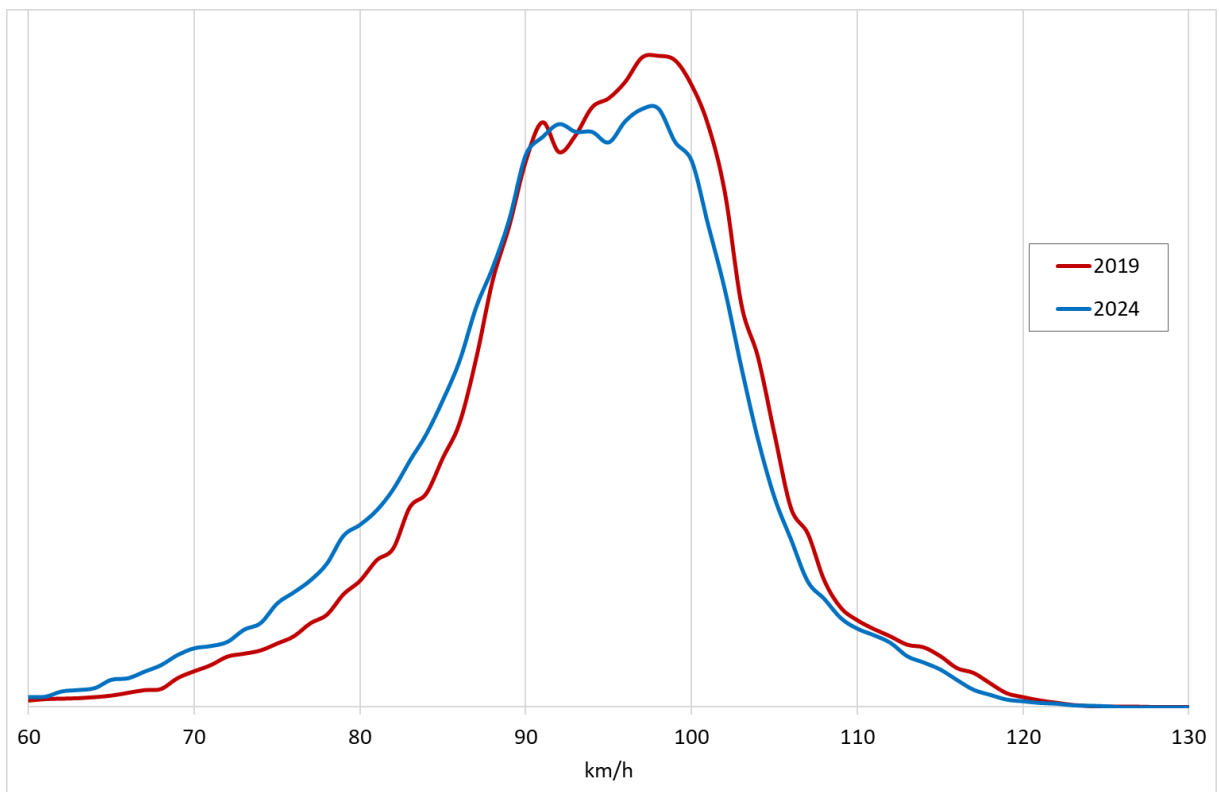


Figure 2: Open roads (default 100 km/h) speed distribution comparison 2019 and 2024

## Urban roads (default 50 km/h)

Table 3: Summary table of annual vehicle speeds on urban roads (default 50 km/h)

| Method                               | Year | Mean speed (km/h) | 85 <sup>th</sup> percentile speed (km/h) | Percent exceeding 50 km/h |
|--------------------------------------|------|-------------------|--|---------------------------|
| (1996 to 2015)<br>car speeds         | 1996 | 56.5              | 64                                       | 82%                       |
|                                      | 1997 | 56.3              | 63                                       | 82%                       |
|                                      | 1998 | 55.9              | 63                                       | 81%                       |
|                                      | 1999 | 55.8              | 63                                       | 80%                       |
|                                      | 2000 | 55.3              | 62                                       | 79%                       |
|                                      | 2001 | 55.2              | 62                                       | 79%                       |
|                                      | 2002 | 54.3              | 61                                       | 76%                       |
|                                      | 2003 | 53.7              | 60                                       | 72%                       |
|                                      | 2004 | 52.9              | 58                                       | 67%                       |
|                                      | 2005 | 52.4              | 58                                       | 63%                       |
|                                      | 2006 | 52.6              | 58                                       | 63%                       |
|                                      | 2007 | 52.5              | 58                                       | 63%                       |
|                                      | 2008 | 52.6              | 58                                       | 64%                       |
|                                      | 2009 | 52.3              | 57                                       | 61%                       |
|                                      | 2010 | 52.0              | 57                                       | 58%                       |
|                                      | 2011 | 52.0              | 57                                       | 59%                       |
|                                      | 2012 | 51.3              | 56                                       | 53%                       |
|                                      | 2013 | 51.7              | 57                                       | 56%                       |
|                                      | 2014 | 51.1              | 56                                       | 52%                       |
|                                      | 2015 | 50.4              | 55                                       | 46%                       |
| ...                                  |      |                   |  |                           |
| (2018 to 2024)<br>all vehicle speeds | 2018 | 43.7              | 53.4                                     | 36%                       |
|                                      | 2019 | 44.1              | 53.6                                     | 37%                       |
|                                      | 2020 | 43.3              | 52.9                                     | 32%                       |
|                                      | 2021 | 43.8              | 54.3                                     | 37%                       |
|                                      | 2022 | 43.3              | 53.6                                     | 33%                       |
|                                      | 2023 | 41.9              | 52.8                                     | 28%                       |
|                                      | 2024 | 40.0              | 51.2                                     | 20%                       |

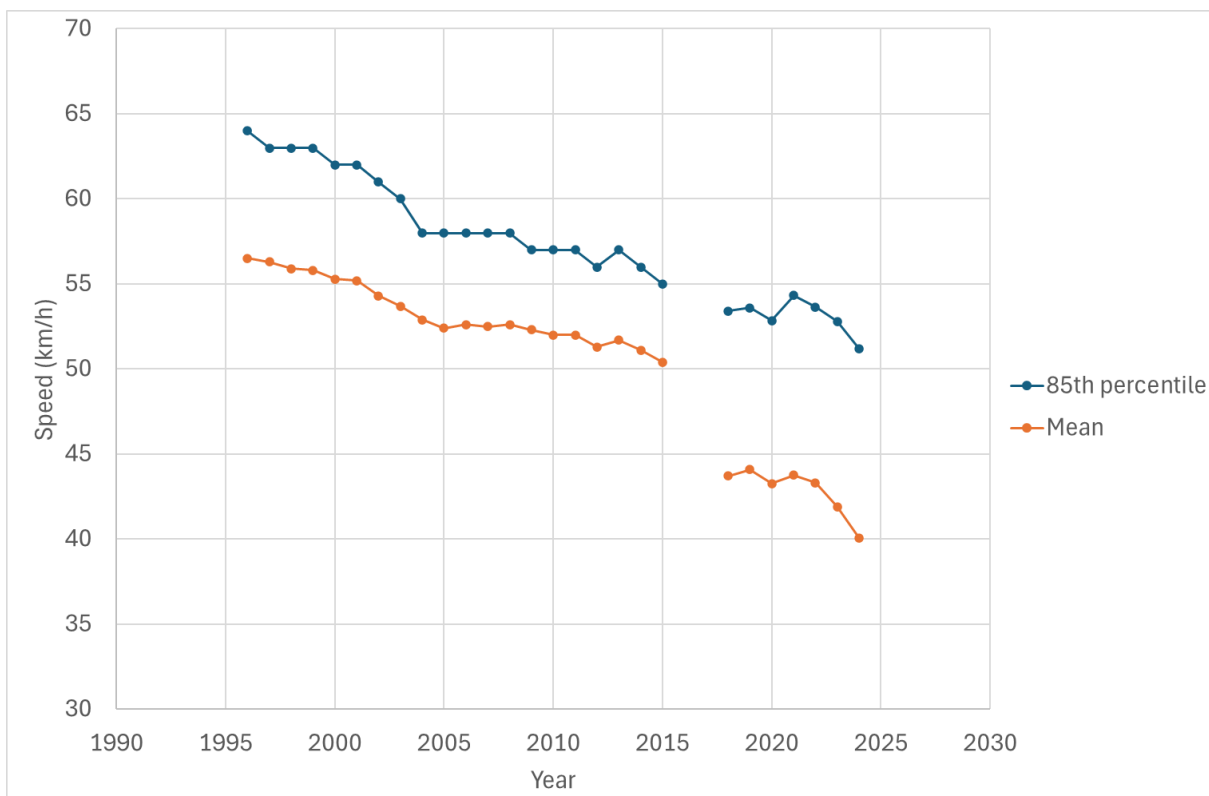


Figure 3: Urban roads (default 50 km/h) annual speed results

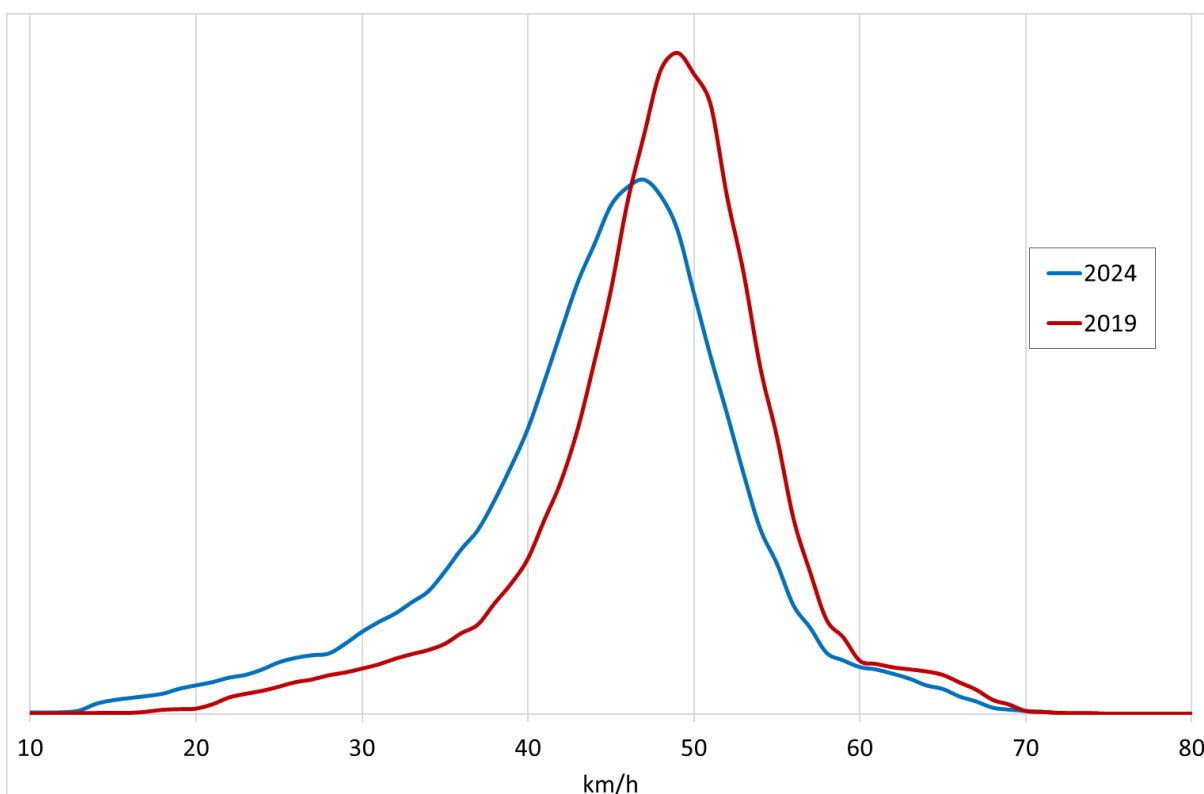


Figure 4: Urban roads (default 50 km/h) speed distribution comparison 2019 and 2024



# Percentage of vehicles exceeding the speed limit

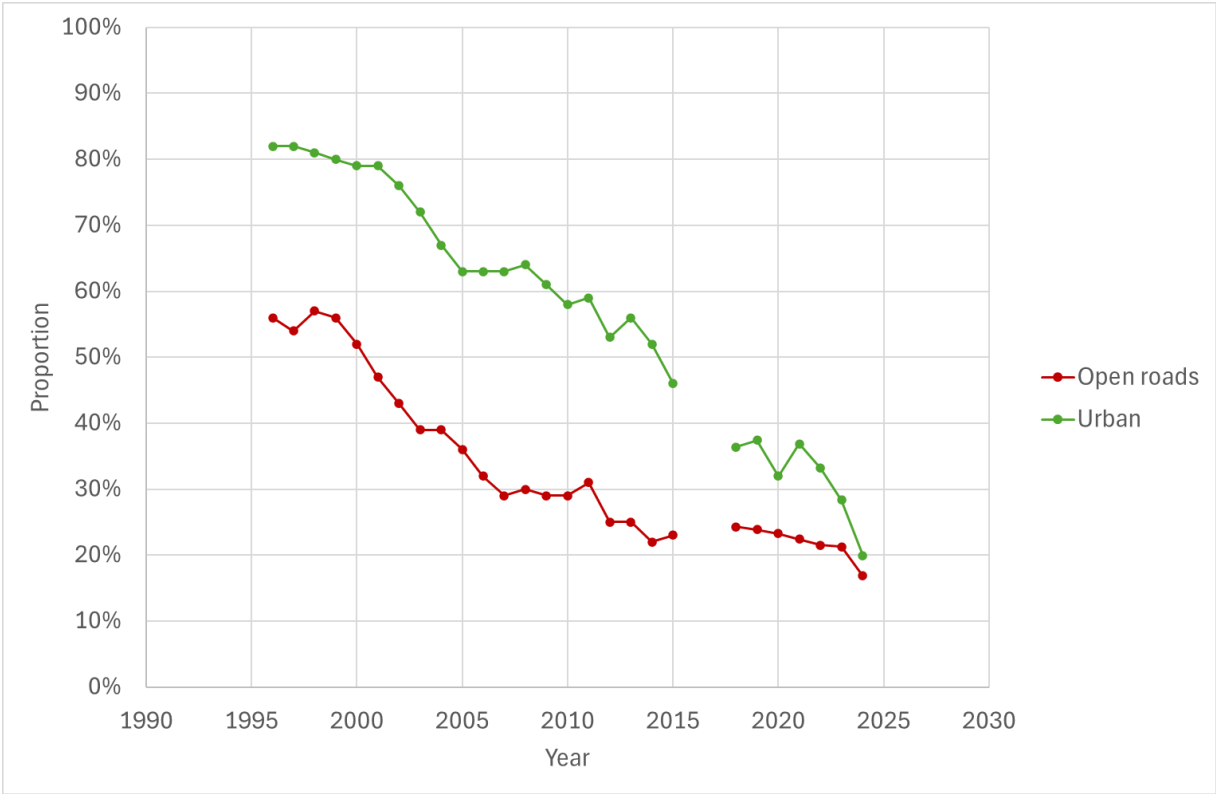


Figure 5: Percentage of vehicles exceeding the speed limit

## Regional results

The regional survey results are designed to track mean speeds within regions. They are not designed to provide valid comparisons between regions. Note that the methodologies for the two survey periods (1996 to 2015) and (2018 to 2024) are different and thus cannot be compared directly.

*Table 4: Summary of the national speed survey 2024 results per region*

|                           | Open road<br>mean speed (km/h) | Open road<br>85th percentile<br>speed (km/h) | Open road<br>% exceeding speed<br>limit | Urban road<br>mean speed (km/h) | Urban road<br>85th percentile<br>speed (km/h) | Urban road<br>% exceeding<br>speed limit |
|---------------------------|--------------------------------|--|---|---------------------------------|---|--|
| <b>Northland</b>          | 90.5                           | 100  | 15%                                     | 44.4                            | 54.8  | 39%                                      |
| <b>Auckland</b>           | 82.3                           | 95   | 6%                                      | 38.5                            | 50.4  | 17%                                      |
| <b>Waikato</b>            | 92.8                           | 102  | 23%                                     | 37.4                            | 48.3  | 10%                                      |
| <b>Bay of Plenty</b>      | 89.4                           | 99   | 13%                                     | 38.6                            | 51.7  | 21%                                      |
| <b>Gisborne</b>           | 87.2                           | 101  | 18%                                     | 39.6                            | 52.1  | 24%                                      |
| <b>Hawke's Bay</b>        | 94.7                           | 103  | 29%                                     | 39.5                            | 51.2  | 20%                                      |
| <b>Taranaki</b>           | 92.2                           | 102  | 23%                                     | 41.1                            | 51.4  | 21%                                      |
| <b>Manawatū-Whanganui</b> | 93.5                           | 103  | 29%                                     | 42.2                            | 53.4  | 33%                                      |
| <b>Wellington</b>         | 92.8                           | 102  | 26%                                     | 42.1                            | 51.1  | 20%                                      |
| <b>Nelson-Marlborough</b> | 93.2                           | 103  | 26%                                     | 42.9                            | 52.7  | 29%                                      |
| <b>West Coast</b>         | 95.1                           | 104  | 31%                                     | 41.9                            | 50.0  | 15%                                      |
| <b>Canterbury</b>         | 94.9                           | 103  | 28%                                     | 42.1                            | 52.5  | 28%                                      |
| <b>Otago</b>              | 95.6                           | 103  | 30%                                     | 38.8                            | 50.9  | 19%                                      |
| <b>Southland</b>          | 93.8                           | 103  | 31%                                     | 44.9                            | 55.2  | 49%                                      |

Table 5: Open road (default 100 km/h) mean speed by region

| Survey period:             | 2009 to 2015<br>car speeds (km/h) |       |       |      |      |      |      | ... | 2018 to 2024<br>all vehicle speeds (km/h) |      |      |      |      |      |      |
|----------------------------|-----------------------------------|-------|-------|------|------|------|------|-----|---|------|------|------|------|------|------|
| Region                     | 2009                              | 2010  | 2011  | 2012 | 2013 | 2014 | 2015 |     | 2018                                      | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| <b>Northland</b>           | 95.8                              | 96.0  | 95.5  | 93.6 | 94.5 | 94.7 | 92.1 |     | 91.9                                      | 90.0 | 90.0 | 90.8 | 89.2 | 90.5 | 90.5 |
| <b>Auckland</b>            | 95.9                              | 93.8  | 95.5  | 93.3 | 94.8 | 93.6 | 90.7 |     | 88.9                                      | 88.7 | 88.2 | 82.6 | 86.8 | 86.8 | 82.3 |
| <b>Waikato</b>             | 94.6                              | 94.8  | 93.7  | 93.0 | 93.8 | 93.7 | 93.9 |     | 90.6                                      | 92.6 | 94.3 | 95.0 | 87.8 | 94.4 | 92.8 |
| <b>Bay of Plenty</b>       | 96.7                              | 98.4  | 97.0  | 96.7 | 96.7 | 96.4 | 98.1 |     | 91.2                                      | 91.1 | 91.2 | 92.0 | 92.4 | 84.3 | 89.4 |
| <b>Gisborne</b>            | 96.4                              | 95.4  | 96.5  | 94.0 | 90.7 | 87.0 | 93.9 |     | 89.3                                      | 89.6 | 88.3 | 88.9 | 89.1 | 86.9 | 87.2 |
| <b>Hawke's Bay</b>         | 99.3                              | 100.3 | 99.9  | 93.8 | 95.2 | 94.3 | 94.1 |     | 88.9                                      | 96.9 | 97.0 | 97.3 | 96.4 | 95.2 | 94.7 |
| <b>Taranaki</b>            | 93.0                              | 92.9  | 96.3  | 97.2 | 93.9 | 93.3 | 93.3 |     | 92.5                                      | 93.3 | 92.4 | 91.6 | 93.0 | 92.0 | 92.2 |
| <b>Manawatū-Whanganui</b>  | 97.4                              | 96.9  | 100.4 | 97.9 | 97.4 | 97.5 | 97.8 |     | 96.4                                      | 95.2 | 96.2 | 96.1 | 95.8 | 96.0 | 93.5 |
| <b>Wellington</b>          | 95.6                              | 94.4  | 94.7  | 95.2 | 96.0 | 96.3 | 95.4 |     | 93.6                                      | 93.0 | 93.2 | 91.6 | 92.9 | 93.3 | 92.8 |
| <b>Nelson-Marlborough*</b> | -                                 | -     | -     | -    | -    | -    | -    |     | 92.7                                      | 92.3 | 93.9 | 93.9 | 92.2 | 92.8 | 93.2 |
| <b>West Coast*</b>         | -                                 | -     | -     | -    | -    | -    | -    |     | 95.1                                      | 95.6 | 96.6 | 96.2 | 96.1 | 94.1 | 95.1 |
| <b>Canterbury</b>          | 98.9                              | 98.3  | 100.7 | 99.3 | 99.2 | 98.4 | 98.3 |     | 96.5                                      | 96.5 | 96.3 | 96.3 | 95.5 | 96.1 | 94.9 |
| <b>Otago</b>               | 99.7                              | 98.8  | 99.5  | 99.4 | 99.4 | 99.6 | 98.2 |     | 95.7                                      | 96.5 | 96.4 | 96.9 | 96.0 | 95.2 | 95.6 |
| <b>Southland</b>           | 99.9                              | 99.3  | 93.4  | 98.3 | 98.2 | 95.2 | 96.2 |     | 95.7                                      | 93.4 | 95.5 | 95.7 | 95.0 | 95.6 | 93.8 |

\* too few sites in this area to provide regional results for 2009 to 2015.

Table 6: Open roads (default 100 km/h) 85<sup>th</sup> percentile speed by region

| Survey period:                                    | 2009 to 2015<br>car speeds (km/h) |      |      |      |      |      |      | ... | 2018 to 2024<br>all vehicle speeds (km/h) |      |      |      |      |      |      |
|---|-----------------------------------|------|------|------|------|------|------|-----|---|------|------|------|------|------|------|
| Region  | 2009                              | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |     | 2018                                      | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| <b>Northland</b>                                  | 103                               | 104  | 103  | 101  | 103  | 102  | 100  |     | 101                                       | 100  | 100  | 100  | 100  | 100  | 100  |
| <b>Auckland</b>                                   | 110                               | 107  | 108  | 106  | 107  | 106  | 103  |     | 100                                       | 100  | 99   | 99   | 98   | 98   | 95   |
| <b>Waikato</b>                                    | 100                               | 100  | 99   | 99   | 99   | 99   | 99   |     | 103                                       | 103  | 103  | 103  | 103  | 103  | 102  |
| <b>Bay of Plenty</b>                              | 106                               | 106  | 106  | 107  | 106  | 106  | 108  |     | 101                                       | 101  | 101  | 102  | 102  | 101  | 99   |
| <b>Gisborne</b>                                   | 107                               | 106  | 106  | 106  | 100  | 100  | 103  |     | 103                                       | 102  | 101  | 103  | 102  | 101  | 101  |
| <b>Hawke's Bay</b>                                | 104                               | 105  | 105  | 99   | 100  | 100  | 99   |     | 104                                       | 105  | 104  | 105  | 105  | 104  | 103  |
| <b>Taranaki</b>                                   | 100                               | 100  | 104  | 104  | 102  | 101  | 100  |     | 103                                       | 103  | 102  | 102  | 102  | 102  | 102  |
| <b>Manawatū-Whanganui</b>                         | 103                               | 103  | 106  | 104  | 104  | 103  | 103  |     | 104                                       | 103  | 104  | 103  | 103  | 103  | 103  |
| <b>Wellington</b>                                 | 104                               | 102  | 102  | 103  | 105  | 104  | 102  |     | 102                                       | 102  | 102  | 101  | 102  | 103  | 102  |
| <b>Nelson-Marlborough*</b>                        | -                                 | -    | -    | -    | -    | -    | -    |     | 103                                       | 104  | 104  | 103  | 102  | 103  | 103  |
| <b>West Coast</b> Error!<br>Bookmark not defined. | -                                 | -    | -    | -    | -    | -    | -    |     | 105                                       | 105  | 105  | 105  | 106  | 105  | 104  |
| <b>Canterbury</b>                                 | 103                               | 102  | 104  | 103  | 103  | 102  | 102  |     | 104                                       | 104  | 104  | 104  | 103  | 104  | 103  |
| <b>Otago</b>                                      | 104                               | 103  | 104  | 104  | 105  | 105  | 104  |     | 104                                       | 104  | 104  | 104  | 103  | 103  | 103  |
| <b>Southland</b>                                  | 105                               | 105  | 99   | 104  | 103  | 100  | 101  |     | 104                                       | 103  | 104  | 104  | 104  | 103  | 103  |

\* too few sites in this area to provide regional estimates for 2009 to 2015.

Table 7: Open roads (default 100 km/h) percentage of vehicles exceeding the speed limit

| Region             | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|--------------------|------|------|------|------|------|------|------|
| Northland          | 20%  | 15%  | 15%  | 16%  | 14%  | 16%  | 15%  |
| Auckland           | 16%  | 16%  | 13%  | 12%  | 11%  | 11%  | 6%   |
| Waikato            | 25%  | 26%  | 28%  | 31%  | 27%  | 28%  | 23%  |
| Bay of Plenty      | 21%  | 19%  | 19%  | 20%  | 21%  | 17%  | 13%  |
| Gisborne           | 26%  | 22%  | 20%  | 23%  | 23%  | 20%  | 18%  |
| Hawke's Bay        | 27%  | 38%  | 37%  | 40%  | 37%  | 33%  | 29%  |
| Taranaki           | 28%  | 26%  | 23%  | 22%  | 24%  | 24%  | 23%  |
| Manawatu-Whanganui | 38%  | 33%  | 35%  | 33%  | 33%  | 31%  | 29%  |
| Wellington         | 26%  | 23%  | 23%  | 20%  | 24%  | 27%  | 26%  |
| Nelson-Marlborough | 25%  | 30%  | 31%  | 26%  | 24%  | 26%  | 26%  |
| West Coast         | 34%  | 34%  | 39%  | 37%  | 38%  | 37%  | 31%  |
| Canterbury         | 36%  | 35%  | 35%  | 34%  | 30%  | 33%  | 28%  |
| Otago              | 33%  | 36%  | 36%  | 36%  | 32%  | 32%  | 30%  |
| Southland          | 33%  | 31%  | 34%  | 34%  | 33%  | 32%  | 31%  |

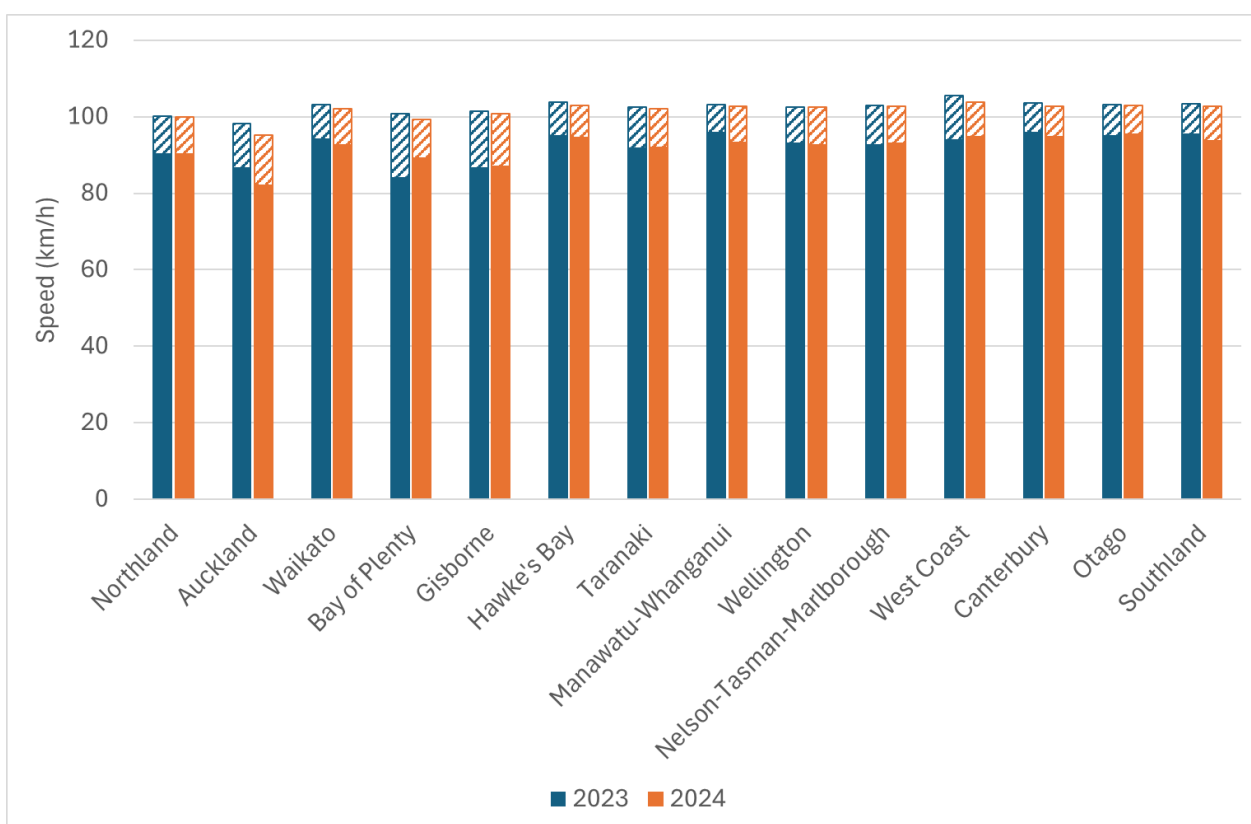


Figure 6: Open roads (default 100 km/h) mean speed and 85<sup>th</sup> percentile speed by region

Table 8: Urban roads (default 50 km/h) mean speed by region

| Survey period:            | 2009 to 2015<br>car speeds (km/h) |      |      |      |      |      |      | ... | 2018 to 2024<br>all vehicle speeds (km/h) |      |      |      |      |      |      |
|---------------------------|-----------------------------------|------|------|------|------|------|------|-----|---|------|------|------|------|------|------|
| Region                    | 2009                              | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |     | 2018                                      | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| <b>Northland</b>          | 51.8                              | 51.7 | 51.5 | 51.8 | 52.6 | 51.9 | 50.4 |     | 46.7                                      | 45.4 | 44.9 | 47.2 | 46.4 | 45.2 | 44.4 |
| <b>Auckland</b>           | 54.8                              | 54.1 | 54   | 52.7 | 54.1 | 52.9 | 51.5 |     | 43.1                                      | 44.1 | 42.4 | 43.4 | 43.1 | 40.2 | 38.5 |
| <b>Waikato</b>            | 51.5                              | 52.3 | 51.8 | 51.9 | 51.5 | 50.3 | 50.5 |     | 44.4                                      | 43.8 | 42.6 | 41.2 | 41.4 | 41.6 | 37.4 |
| <b>Bay of Plenty</b>      | 55                                | 55.3 | 55.2 | 54.5 | 54.6 | 53.9 | 52.4 |     | 44.7                                      | 43.8 | 43.5 | 44.5 | 44.3 | 43.3 | 38.6 |
| <b>Gisborne</b>           | 49.2                              | 49.2 | 49.5 | 47.8 | 46.9 | 46.2 | 46.1 |     | 41.9                                      | 42.0 | 40.3 | 39.3 | 40.4 | 40.4 | 39.6 |
| <b>Hawke's Bay</b>        | 52.7                              | 51.4 | 52.1 | 52.1 | 50.6 | 50   | 50.1 |     | 42.2                                      | 43.9 | 42.5 | 45.8 | 42.4 | 42.5 | 39.5 |
| <b>Taranaki</b>           | 48.7                              | 48.8 | 49.4 | 48.5 | 48.4 | 48.4 | 48.4 |     | 42.8                                      | 44.7 | 43.7 | 44.8 | 44.4 | 43.6 | 41.1 |
| <b>Manawatū-Whanganui</b> | 51.2                              | 50.9 | 51.6 | 50.4 | 50.8 | 50.7 | 50.7 |     | 44.1                                      | 44.8 | 43.5 | 43.6 | 43.6 | 43.1 | 42.2 |
| <b>Wellington</b>         | 49.3                              | 49.1 | 49.1 | 49.3 | 49   | 48.5 | 48   |     | 43.6                                      | 41.8 | 43.2 | 44.4 | 43.3 | 42.2 | 42.1 |
| <b>Nelson-Marlborough</b> | 48.9                              | 49   | 49   | 49.1 | 48.8 | 47.8 | 47.4 |     | 44.7                                      | 44.3 | 43.7 | 44.1 | 43.3 | 43.9 | 42.9 |
| <b>West Coast*</b>        | -                                 | -    | -    | -    | -    | -    | -    |     | 43.2                                      | 45.0 | 43.4 | 42.8 | 41.6 | 40.3 | 41.9 |
| <b>Canterbury</b>         | 52.5                              | 52.3 | 51.4 | 50.4 | 51.3 | 50.9 | 50.3 |     | 44.1                                      | 45.6 | 45.6 | 44.6 | 44.4 | 43.8 | 42.1 |
| <b>Otago</b>              | 51.4                              | 51   | 50.9 | 50.9 | 50.6 | 51.3 | 50.8 |     | 41.9                                      | 42.6 | 41.5 | 41.7 | 41.3 | 39.8 | 38.8 |
| <b>Southland</b>          | 54.3                              | 54   | 54.1 | 53.3 | 54.1 | 53.6 | 53.7 |     | 49.5                                      | 46.4 | 46.5 | 46.2 | 45.4 | 45.3 | 44.9 |

\* too few sites in this area to provide regional estimates for 2009 to 2015.



Table 9: Urban roads (default 50 km/h) 85<sup>th</sup> percentile speed by region

| Survey period:            | (2009 to 2015)<br>car speeds |      |      |      |      |      |      | ... | (2018 to 2024)<br>all vehicle speeds |      |      |      |      |      |      |
|---------------------------|------------------------------|------|------|------|------|------|------|-----|--------------------------------------|------|------|------|------|------|------|
| Region                    | 2009                         | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |     | 2018                                 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| <b>Northland</b>          | 56                           | 56   | 56   | 56   | 57   | 56   | 54   |     | 54.0                                 | 53.5 | 54.1 | 57.0 | 56.3 | 55.2 | 54.8 |
| <b>Auckland</b>           | 59                           | 59   | 58   | 57   | 59   | 57   | 55   |     | 54.2                                 | 54.2 | 52.8 | 54.5 | 53.7 | 52.1 | 50.4 |
| <b>Waikato</b>            | 57                           | 57   | 57   | 56   | 57   | 55   | 55   |     | 54.9                                 | 53.8 | 52.2 | 52.9 | 52.0 | 52.5 | 48.3 |
| <b>Bay of Plenty</b>      | 62                           | 62.5 | 61.5 | 60.5 | 60.5 | 59.5 | 58.5 |     | 53.3                                 | 53.2 | 53.6 | 55.5 | 55.2 | 54.2 | 51.7 |
| <b>Gisborne</b>           | 54                           | 54   | 54.5 | 53   | 53   | 52   | 52   |     | 53.8                                 | 52.5 | 52.9 | 54.5 | 54.6 | 53.7 | 52.1 |
| <b>Hawke's Bay</b>        | 57                           | 56   | 56   | 57   | 55   | 55   | 55   |     | 50.2                                 | 52.1 | 51.8 | 55.0 | 53.5 | 52.8 | 51.2 |
| <b>Taranaki</b>           | 54                           | 54   | 55   | 54   | 54   | 53   | 54   |     | 52.3                                 | 53.1 | 53.4 | 53.8 | 53.7 | 53.3 | 51.4 |
| <b>Manawatū-Whanganui</b> | 56                           | 56   | 56   | 56   | 56   | 55   | 56   |     | 54.2                                 | 54.2 | 53.8 | 54.9 | 54.1 | 54.2 | 53.4 |
| <b>Wellington</b>         | 53                           | 53   | 53   | 53   | 53   | 53   | 51   |     | 51.6                                 | 51.5 | 51.5 | 53.5 | 52.7 | 51.9 | 51.1 |
| <b>Nelson-Marlborough</b> | 53.5                         | 53   | 53.5 | 53   | 53.5 | 52.5 | 51.5 |     | 52.9                                 | 52.4 | 52.1 | 53.8 | 53.4 | 53.0 | 52.7 |
| <b>West Coast*</b>        | -                            | -    | -    | -    | -    | -    | -    |     | 51.5                                 | 50.8 | 51.0 | 50.3 | 50.5 | 49.9 | 50.0 |
| <b>Canterbury</b>         | 58                           | 59   | 59   | 58   | 59   | 58   | 58   |     | 52.2                                 | 54.0 | 53.6 | 54.4 | 54.1 | 53.6 | 52.5 |
| <b>Otago</b>              | 56.5                         | 55.5 | 55.5 | 55.5 | 55.5 | 55.5 | 55.5 |     | 53.2                                 | 52.9 | 52.4 | 53.2 | 52.0 | 51.6 | 50.9 |
| <b>Southland</b>          | 58.5                         | 58.5 | 58.5 | 57.5 | 58.5 | 58.5 | 57.5 |     | 57.6                                 | 56.5 | 56.6 | 56.8 | 56.0 | 55.9 | 55.2 |

\* too few sites in this area to provide regional estimates for 2009 to 2015.

Table 10: Urban roads (default 50 km/h) percentage of vehicles exceeding the speed limit by region

| Region             | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|--------------------|------|------|------|------|------|------|------|
| Northland          | 41%  | 34%  | 39%  | 51%  | 48%  | 41%  | 39%  |
| Auckland           | 41%  | 40%  | 30%  | 36%  | 33%  | 24%  | 17%  |
| Waikato            | 45%  | 39%  | 28%  | 29%  | 24%  | 27%  | 10%  |
| Bay of Plenty      | 34%  | 32%  | 35%  | 42%  | 41%  | 36%  | 21%  |
| Gisborne           | 39%  | 29%  | 30%  | 34%  | 33%  | 30%  | 24%  |
| Hawke's Bay        | 16%  | 25%  | 25%  | 44%  | 32%  | 28%  | 20%  |
| Taranaki           | 29%  | 36%  | 39%  | 37%  | 37%  | 34%  | 21%  |
| Manawatū-Whanganui | 43%  | 41%  | 40%  | 41%  | 38%  | 37%  | 33%  |
| Wellington         | 25%  | 25%  | 24%  | 33%  | 27%  | 23%  | 20%  |
| Nelson-Marlborough | 36%  | 33%  | 28%  | 34%  | 33%  | 32%  | 29%  |
| West Coast         | 27%  | 20%  | 21%  | 17%  | 17%  | 14%  | 15%  |
| Canterbury         | 28%  | 43%  | 40%  | 40%  | 39%  | 35%  | 28%  |
| Otago              | 33%  | 31%  | 29%  | 30%  | 25%  | 22%  | 19%  |
| Southland          | 66%  | 59%  | 61%  | 54%  | 51%  | 51%  | 49%  |

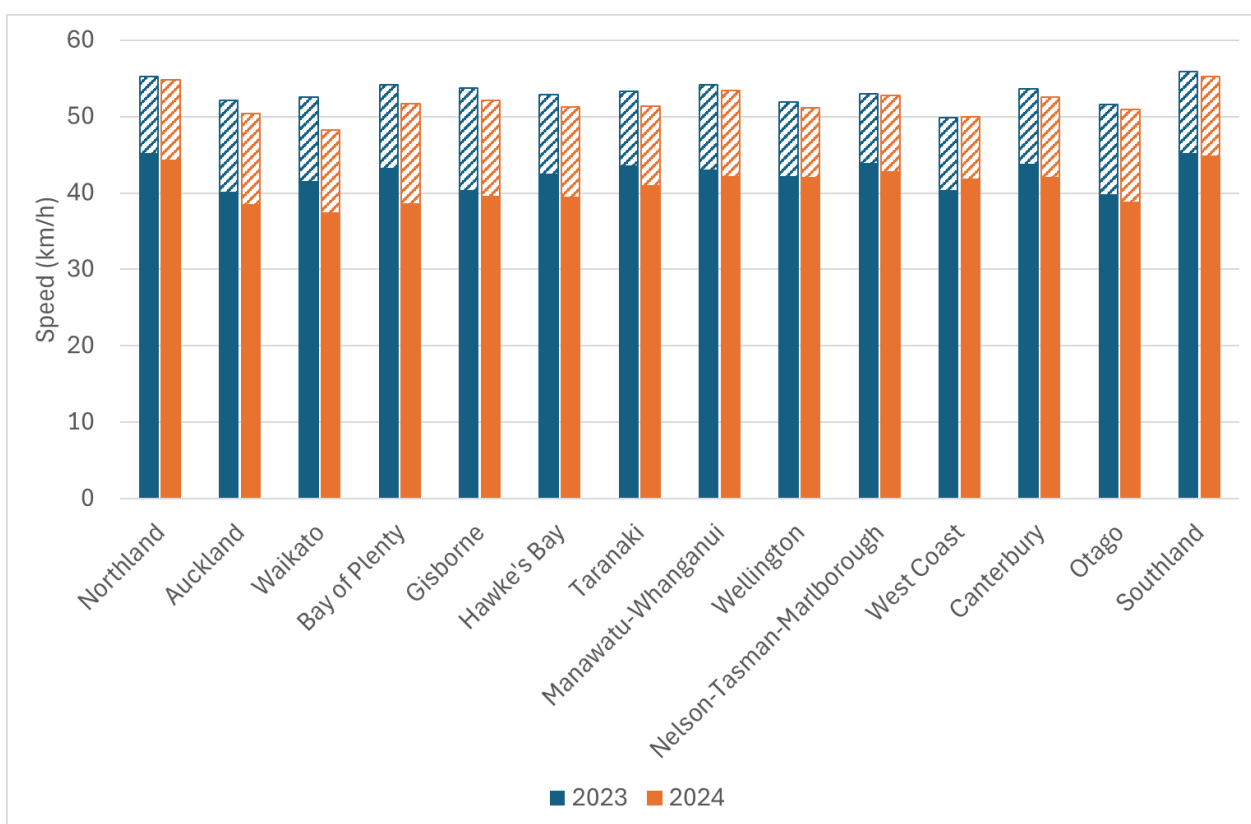


Figure 7: Urban roads (default 50 km/h) mean speed and 85<sup>th</sup> percentile speed by region



# Appendix A: Overview of previous survey methodology (1996 to 2015)

Survey methodologies have changed over time. This is the first speed survey published since 2015. The Ministry of Transport (MOT) previously produced surveys from 1996 to 2015.

[Ministry of Transport 2015 Speed survey results summary.](#)

**Key differences, to the new survey methodology (see Appendix B), are:**

1. MOT recorded free speeds (unimpeded). The new methodology reports harmonic average.
2. Weather had to be fine, and there were no road works or other impediments in MOT data. TomTom captures an average speed over a four-week period regardless of conditions.
3. MOT recorded the speeds of cars and heavy vehicles separately. The new methodology records an average across all vehicle types.
4. The weighting of speeds to aggregate to regions, and nationally, is unknown for previous MOT results. The methodology is weighted regionally by VKT.
5. MOT recorded spot speeds at a point. The new methodology records speeds over a distance.

## Background

The aim of the Ministry of Transport (MOT) speed surveys was to provide a consistent time series of open road (100 km/h) and urban road (50 km/h) free (unimpeded) speeds.

MOT speed surveys were designed to monitor changes in free speeds of vehicles. Free speeds are measured when vehicles are unimpeded by the presence of other vehicles or by environmental features. Monitoring the speeds of unimpeded vehicles provided a measure of driver choice of speed. This provided MOT with information on the effectiveness of speed management measures and for developing safety policies.

Speed surveys were conducted at randomly selected sites around New Zealand annually to provide an estimate of the national speed profile. There were about 65 open road and 65 urban sites surveyed each year. The current sites have been surveyed since 1996. The speed survey results could be broken down to a regional level and into light and heavy vehicles.

The regional surveys were designed to track changes over time in driver speed choice within regions; they were not designed to provide valid comparisons between regions.

Vehicle speeds were measured by a surveyor, who surveyed the site at the same time of day and day of the week as in previous years. The surveys were carried out in an unobtrusive manner to ensure that the speeds measured were minimally affected by survey procedures.

## Methodology

Speed surveys were carried out in July / August of each year, excluding school holidays. Surveys were only carried out when weather and road conditions allowed for “normal” travel. For example, they should not have been carried out in the rain, under icy conditions, or if roadworks were present. In some years it may have been necessary to continue surveying into September, to complete all surveys. Extension into September should have been kept as an emergency measure – surveys were to be scheduled to take place during July and August. At each site, one of two methods were used to measure traffic volume and speed – laser or digitector.

## Appendix B: Overview of new survey methodology (2018 to 2024)

The new methodology uses TomTom Traffic Stats Route Analysis. Speeds are obtained for the first 28 days of August, four complete weeks. Speed data is collected for the time range 10 am to 2 pm, to avoid busy periods. Vehicle speeds obtained through TomTom include all vehicle types. Results are reported using the harmonic mean for average speeds.

The sampled vehicle numbers are used to weight the site results to regional level, then the national results are obtained by weighting the regional figures by regional Vehicle Kilometres Travelled (VKT) taken from *Vehicle use (VKT) within Road Controlling Authority areas, in each region and in NZ* - [Data and tools | NZ Transport Agency Waka Kotahi](#).

Speed survey sites have been chosen to correspond to previous sites used in the MOT speed surveys (1996 to 2015). Some sites have been removed, or replaced, due to speed limit changes on sections of road. The 2024 speed survey is limited to urban sites with a speed limit of 50 km/h and open road sites with a limit of 100 km/h.

The TomTom methodology is time-consuming, although much quicker than standing by the side of a road with a speed gun or laying down tubes. Some opportunities for automation have been identified and may be implemented as reporting systems are further developed to make best use of the TomTom data.

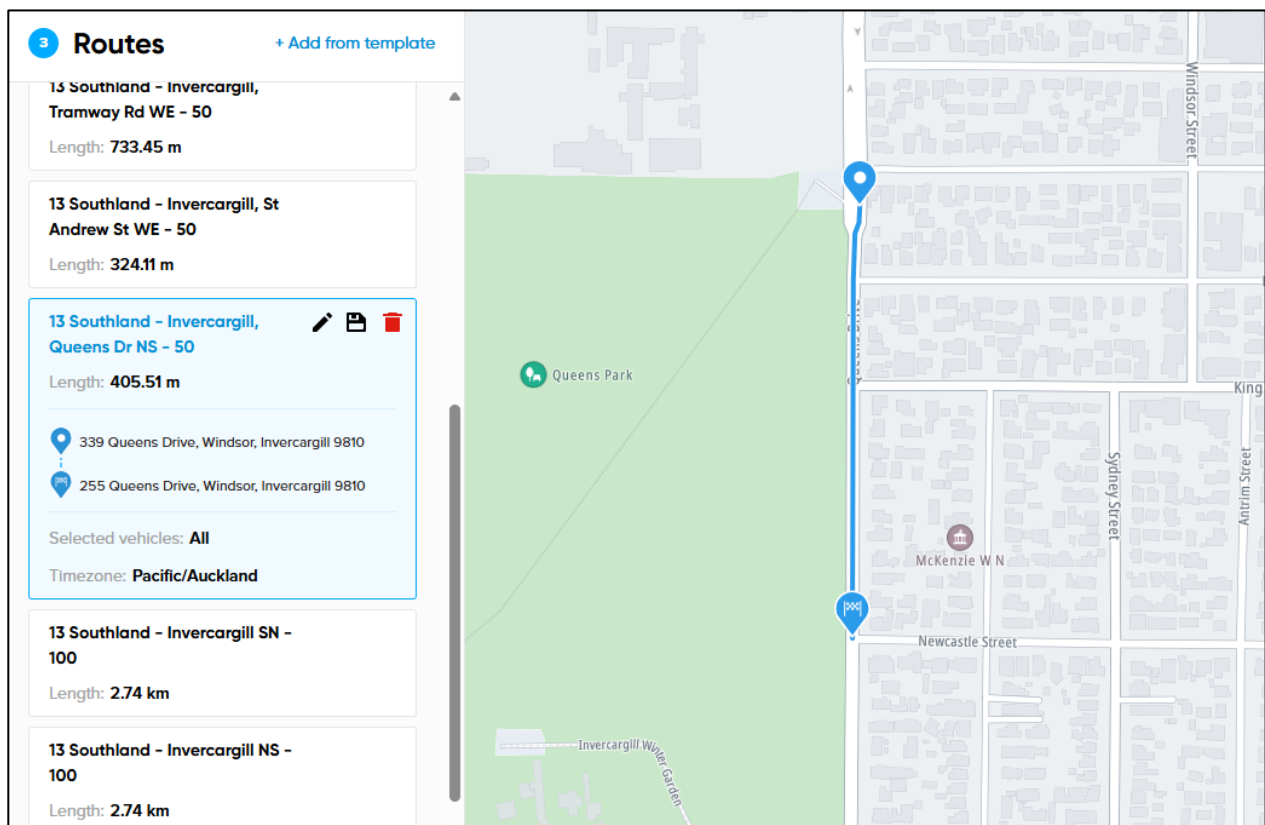


Figure 8: Screenshot of a TomTom Traffic Stats Route Analysis query

## Site Locations

Table 11: Urban road (default 50 km/h) sites (2024)

| Region                    | Site                                     | Length (km) | Harmonic Mean Speed (km/h) |
|---------------------------|--|-------------|----------------------------|
| <b>Northland</b>          | Whangarei, Rewarewa Rd WE                | 0.7         | 43.3                       |
|                           | Whangarei, Onerahi Rd NS                 | 0.8         | 49.4                       |
|                           | Whangarei, Kamo Rd NS                    | 0.4         | 39.9                       |
|                           | Whangarei, Central Ave SN                | 0.1         | 34.9                       |
| <b>Auckland</b>           | Auckland, Russell Rd, Manurewa NS        | 0.2         | 39.9                       |
|                           | Auckland, Merton Rd, Glen Innes EW       | 0.4         | 41.3                       |
|                           | Auckland, Landscape Rd, Mt Eden WE       | 0.4         | 34.9                       |
|                           | Auckland, Hutchinsons Rd, Highland Pk SN | 0.6         | 43.8                       |
|                           | Auckland, Hepburn Rd, Glendene SN        | 0.8         | 37.8                       |
|                           | Auckland, Great South Rd, Manurewa SN    | 0.9         | 36.9                       |
|                           | Auckland, Dominion Rd, Mt Roskill NS     | 0.5         | 36.1                       |
|                           | Auckland, Coronation Rd, Hillcrest EW    | 0.3         | 42.3                       |
|                           | Auckland, Buckland Rd, Papatoetoe WE     | 0.6         | 42.0                       |
|                           | Auckland, Bruce McLaren Rd NS            | 0.4         | 38.7                       |
|                           | Auckland, Bayswater Ave WE               | 0.4         | 39.3                       |
|                           | Hamilton, Rifle Range Rd SN              | 0.5         | 34.4                       |
|                           | Hamilton, Fifth Ave WE                   | 0.4         | 39.3                       |
|                           | Hamilton, Clarkin Rd EW                  | 0.3         | 41.0                       |
| <b>Bay of Plenty</b>      | Tauranga, Otumoetai Rd SN                | 0.6         | 44.3                       |
|                           | Tauranga, Maunganui Rd SN                | 0.3         | 27.8                       |
|                           | Tauranga, Maleme St EW                   | 0.4         | 34.0                       |
|                           | Tauranga, Cameron Rd SN                  | 0.2         | 39.0                       |
|                           | Rotorua, Malfroy Rd EW                   | 0.4         | 40.6                       |
|                           | Rotorua, Devon St EW                     | 0.3         | 42.1                       |
|                           | Rotorua, Clayton Rd, Western Heights EW  | 0.5         | 44.9                       |
| <b>Gisborne</b>           | Gisborne, Wainui Road WE                 | 0.3         | 36.5                       |
|                           | Gisborne, Stanley Rd SN                  | 0.3         | 35.8                       |
|                           | Gisborne, Childers Rd EW                 | 0.9         | 39.8                       |
|                           | Gisborne, Awapuni Rd EW                  | 0.5         | 44.1                       |
| <b>Hawke's Bay</b>        | Napier, York Ave SN                      | 0.7         | 41.9                       |
|                           | Napier, Kennedy Rd NS                    | 0.8         | 40.2                       |
|                           | Hastings, Tomoana Rd SN                  | 0.5         | 38.5                       |
|                           | Hastings, Heretaunga St East NS          | 0.5         | 38.1                       |
| <b>Taranaki</b>           | New Plymouth, Tukapa St SN               | 0.3         | 36.4                       |
|                           | New Plymouth, Mangorei Rd NS             | 0.4         | 42.9                       |
|                           | New Plymouth, Devon St West EW           | 0.5         | 42.0                       |
|                           | New Plymouth, Carrington St SN           | 0.5         | 43.8                       |
| <b>Manawatu-Whanganui</b> | Whanganui, Purnell St WE                 | 0.6         | 40.9                       |
|                           | Whanganui, Puriri St EW                  | 0.2         | 39.3                       |
|                           | Palmerston North, Vogel St SN            | 0.4         | 41.4                       |



|                           |  |     |      |
|---------------------------|--|-----|------|
|                           | Palmerston North, Maxwells Line NS       | 0.4 | 44.7 |
|                           | Palmerston North, Botanical Rd SN        | 0.4 | 42.9 |
| <b>Wellington</b>         | Wellington, Moxham Ave, Hataitai SN      | 0.4 | 33.5 |
|                           | Wellington, High St, Lower Hutt SN       | 0.5 | 41.1 |
|                           | Wellington, Fergusson Dr, Upper Hutt EW  | 0.6 | 42.9 |
|                           | Wellington, Duncan St, Tawa NS           | 0.5 | 41.9 |
|                           | Wellington, Broadway, Miramar WE         | 0.3 | 40.2 |
|                           | Masterton, High St WE                    | 0.6 | 46.1 |
|                           |  |     |      |
| <b>Nelson-Marlborough</b> | Nelson, Vanguard St NS                   | 0.4 | 38.8 |
|                           | Nelson, Nayland Rd, Stoke SN             | 0.3 | 29.5 |
|                           | Blenheim, Redwood St SN                  | 0.4 | 44.4 |
|                           | Blenheim, Nelson St EW                   | 0.1 | 46.5 |
| <b>West Coast</b>         | Greymouth, High St WE                    | 0.2 | 41.9 |
| <b>Canterbury</b>         | Timaru, Wai-iti Rd EW                    | 0.5 | 41.6 |
|                           | Christchurch, Wairakei Rd, Bryndwr WE    | 0.2 | 44.2 |
|                           | Christchurch, Breezes Rd, Aranui NS      | 0.3 | 37.8 |
|                           | Christchurch, Barrington St, Sydenham SN | 0.2 | 41.0 |
| <b>Otago</b>              | Dunedin, Victoria Rd, St Kilda WE        | 0.9 | 41.7 |
|                           | Dunedin, North Rd WE                     | 0.2 | 32.6 |
|                           | Dunedin, Musselburgh Rise EW             | 0.6 | 36.2 |
|                           | Dunedin, Kaikorai Valley Rd NS           | 0.3 | 39.6 |
| <b>Southland</b>          | Invercargill, Tramway Rd WE              | 0.7 | 41.0 |
|                           | Invercargill, St Andrew St WE            | 0.3 | 40.7 |
|                           | Invercargill, Queens Dr NS               | 0.4 | 47.3 |

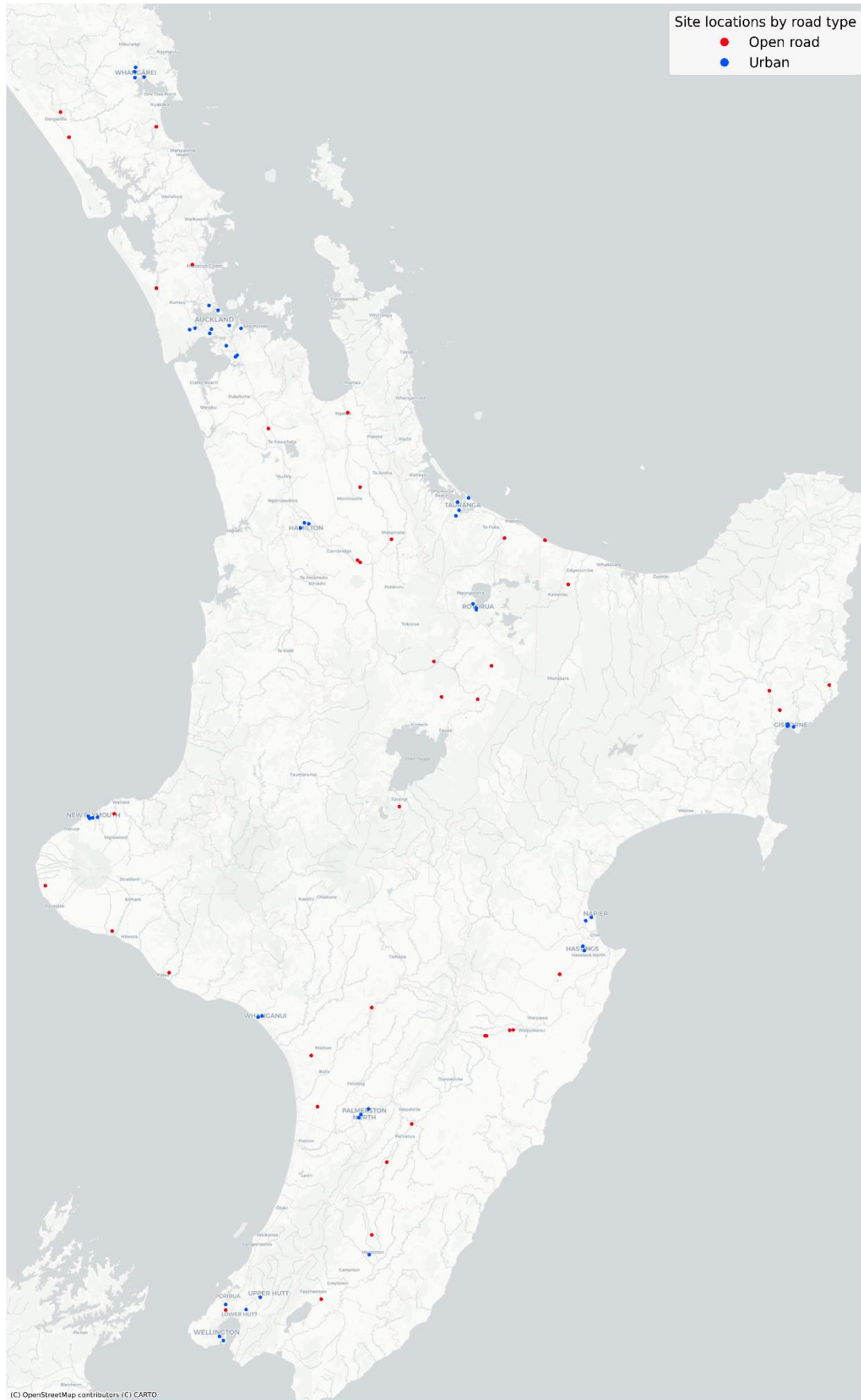
Table 12: Open road (default 100 km/h) sites (2024)

| Region               | Site             | Length | Harmonic Mean |
|----------------------|------------------|--------|---------------|
| <b>Northland</b>     | Waipu SN         | 1.6    | 87.9          |
|                      | Waipu NS         | 1.6    | 90.0          |
|                      | Te Wharau SN     | 1.4    | 91.0          |
|                      | Te Wharau NS     | 1.4    | 91.2          |
|                      | Dargaville SN    | 2.8    | 96.1          |
|                      | Dargaville NS    | 2.8    | 96.8          |
| <b>Auckland</b>      | Orewa WE         | 2.8    | 79.8          |
|                      | Orewa EW         | 2.8    | 77.6          |
|                      | Helensville SN   | 2.3    | 87.4          |
|                      | Helensville NS   | 2.3    | 85.5          |
| <b>Waikato</b>       | Wairakei SN      | 1.5    | 96.2          |
|                      | Wairakei NS      | 1.5    | 96.5          |
|                      | Turangi SN       | 2.3    | 92.6          |
|                      | Turangi NS       | 2.3    | 91.5          |
|                      | Reporoa SN       | 1.7    | 94.8          |
|                      | Reporoa NS       | 1.7    | 95.8          |
|                      | Orakei Korako SN | 1.5    | 94.1          |
|                      | Orakei Korako NS | 1.5    | 93.8          |
|                      | Ngatea WE        | 1.8    | 87.4          |
|                      | Ngatea EW        | 1.9    | 87.1          |
|                      | Morrinsville SN  | 2.7    | 94.2          |
|                      | Morrinsville NS  | 2.7    | 93.1          |
|                      | Mercer SN        | 1.6    | 102.2         |
|                      | Mercer NS        | 1.5    | 100.6         |
|                      | Matamata SN      | 1.0    | 73.3          |
|                      | Matamata NS      | 1.0    | 72.0          |
|                      | Karapiro SN      | 7.5    | 88.9          |
|                      | Karapiro NS      | 1.5    | 87.3          |
|                      | Atiamuri SN      | 1.2    | 96.7          |
|                      | Atiamuri NS      | 1.2    | 94.0          |
| <b>Bay of Plenty</b> | Paengaroa SN     | 1.7    | 87.2          |
|                      | Paengaroa NS     | 1.7    | 87.9          |
|                      | Otaramarakau WE  | 2.3    | 92.8          |
|                      | Otaramarakau EW  | 2.3    | 92.9          |
|                      | Kawerau SN       | 1.9    | 85.1          |
|                      | Kawerau NS       | 1.9    | 84.6          |
| <b>Gisborne</b>      | Tolaga SN        | 1.5    | 89.3          |
|                      | Tolaga NS        | 1.5    | 91.4          |
|                      | Te Karaka SN     | 1.5    | 87.8          |
|                      | Te Karaka NS     | 1.5    | 86.6          |
|                      | Ormond SN        | 1.5    | 84.3          |
|                      | Ormond NS        | 1.5    | 86.3          |
| <b>Hawke's Bay</b>   | Waipukurau WE    | 6.0    | 96.4          |

|                           |                 |     |      |
|---------------------------|-----------------|-----|------|
|                           | Waipukurau EW   | 6.0 | 94.7 |
|                           | Takapau WE      | 4.4 | 97.1 |
|                           | Takapau EW      | 4.4 | 96.3 |
|                           | Poukawa SN      | 3.6 | 91.9 |
|                           | Poukawa NS      | 3.6 | 93.0 |
| <b>Taranaki</b>           | Patea WE        | 1.2 | 92.8 |
|                           | Patea EW        | 1.2 | 93.1 |
|                           | Opunake SN      | 2.0 | 91.3 |
|                           | Opunake NS      | 2.0 | 91.5 |
|                           | Lepperton SN    | 2.0 | 92.5 |
|                           | Lepperton NS    | 2.0 | 89.1 |
|                           | Hawera SN       | 1.9 | 93.3 |
|                           | Hawera NS       | 1.9 | 93.1 |
| <b>Manawatu-Whanganui</b> | Marton WE       | 1.6 | 86.5 |
|                           | Marton EW       | 1.6 | 91.9 |
|                           | Mangatainoka SN | 1.3 | 93.7 |
|                           | Mangatainoka NS | 1.3 | 93.3 |
|                           | Hunternville SN | 2.4 | 96.2 |
|                           | Hunternville NS | 2.4 | 97.0 |
|                           | Himatangi SN    | 3.3 | 93.5 |
|                           | Himatangi NS    | 3.3 | 96.7 |
|                           | Eketahuna SN    | 1.1 | 86.0 |
|                           | Eketahuna NS    | 1.1 | 75.7 |
| <b>Wellington</b>         | Porirua SN      | 1.5 | 92.9 |
|                           | Porirua NS      | 1.3 | 93.0 |
|                           | Masterton SN    | 1.3 | 93.9 |
|                           | Masterton NS    | 1.3 | 95.1 |
|                           | Featherston SN  | 1.4 | 85.7 |
|                           | Featherston NS  | 1.4 | 86.5 |
| <b>Nelson-Marlborough</b> | Seddon SN       | 1.7 | 93.4 |
|                           | Seddon NS       | 1.7 | 92.4 |
|                           | Motupiko SN     | 1.6 | 95.4 |
|                           | Motupiko NS     | 1.6 | 92.6 |
| <b>West Coast</b>         | Westport SN     | 2.8 | 92.9 |
|                           | Westport NS     | 2.8 | 91.3 |
|                           | Hokitika SN     | 3.6 | 96.8 |
|                           | Hokitika NS     | 3.6 | 96.6 |
| <b>Canterbury</b>         | Waimate SN      | 1.7 | 95.4 |
|                           | Waimate NS      | 1.7 | 94.6 |
|                           | Timaru SN       | 1.4 | 94.4 |
|                           | Timaru NS       | 1.4 | 94.1 |
|                           | Hinds SN        | 1.8 | 94.7 |
|                           | Hinds NS        | 1.8 | 93.0 |
|                           | Dunsandel SN    | 2.7 | 95.4 |
|                           | Dunsandel NS    | 2.7 | 94.3 |

|                  |                 |     |      |
|------------------|-----------------|-----|------|
| <b>Otago</b>     | Culverden SN    | 2.2 | 97.4 |
|                  | Culverden NS    | 2.2 | 97.9 |
|                  | Omarama SN      | 2.9 | 97.8 |
|                  | Omarama NS      | 2.9 | 98.8 |
|                  | Oamaru SN       | 2.2 | 94.3 |
|                  | Oamaru NS       | 2.2 | 93.4 |
|                  | Milton SN       | 1.3 | 95.2 |
|                  | Milton NS       | 1.3 | 94.9 |
|                  | Dunedin SN      | 3.7 | 94.4 |
|                  | Dunedin NS      | 3.7 | 95.6 |
| <b>Southland</b> | Riverton WE     | 1.9 | 95.9 |
|                  | Riverton EW     | 1.9 | 95.4 |
|                  | Mataura SN      | 1.1 | 95.0 |
|                  | Mataura NS      | 1.1 | 94.0 |
|                  | Invercargill SN | 2.7 | 95.2 |
|                  | Invercargill NS | 2.7 | 96.0 |
|                  | Bluff WE        | 1.3 | 79.4 |
|                  | Bluff EW        | 1.3 | 82.2 |

## North Island Map



## South Island Map

