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| NSW Penalty Data Tool: Executive Summary |
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# Abstract

There are five analyses conducted in this report – Main Page, Distribution of Cases, Captured by Radar or Camera, Mobile Phone Usage and School Zones. In Main Page, it was found that cases stayed below $500, disobeyed the legislation ‘ROAD RULES 2014’ and offences committed tended to be minor. In Distribution of Cases, speeding offence codes are the most prevalent, with a possible social acceptance for speeding 10km/h and under. In Captured by Radar or Camera, camera is the preferred and most popular capturing method of cases. In Mobile Phone Usage, cases tend to be low, due to the minimal mobile phone cameras surrounding NSW. In School Zones, offence codes, capture preferences and mobile phone usage is surprisingly similar for non-school zones. Each analysis used data that spanned across a 12-month period, between 2015 to 2016.

# Introduction

The purpose of the Executive Summary is to analyse traffic penalty data in NSW from January 1st 2015, to January 1st 2016 (a 12 month period). The first analysis, Main Page, will provide insight into common descriptions, face values (penalty amount for offence) and legislation within the identified time frame. The second analysis, Distribution of Cases, will provide insight into the frequency of offence code penalties and potential reasons for said frequency within the given time frame. The third analysis, Captured by Radar or Camera, will compare radar and camera captured cases and potential reasons for results within the identified time frame. The fourth analysis, Mobile Phone Usage, reveals insight into mobile phone usage cases for the given time frame. The final analysis, School Zone, compares school zone cases to non-school zone cases, investigating said results and reasons, within the identified time frame. By identifying trends, patterns and anomalies of the NSW traffic penalties, the government agency Transport for NSW (TfNSW) can use each individual analysis to create safer roads for the NSW community.

# Graphical user interface Description automatically generated with medium confidence**Analysis 1 – Main Page**

Figure - Default Main Page

Graphical user interface, table

Description automatically generatedEach individual case has an offence year, offence month, offence code, offence description, associated legislation, associated clause (from legislation), face value and whether it was identified on camera. Figure 1 displays the default cases shown to the user, when preferences have not been identified.

Figure - Preferences Selected for Main Page

Figure 2 displays a sample of the cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred outside of a school zone. ‘ROAD RULES 2014’ is more frequent than other legislations associated to this period. Most cases were captured by radar, and cases tend to be minor traffic offences (e.g., disobeying signs, such as stopping at a red light or no parking). Besides the occasional outliers, as highlighted in Figure 2, face value stayed below the $500 range.

# Chart, pie chart Description automatically generatedAnalysis 2 – Distribution of Cases (Offence Code)

Figure – Preferences Selected for Offence Codes

Figure 3 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred outside of a school zone. Majority of the offence codes refer to speeding, which seems to be a prevalent issue in NSW. Each offence was recorded by camera. Each offence was committed individually, meaning the traffic offender was alone in the car when committing the crime. The most frequent offence code found across these set of cases was the ‘Motor vehicle exceed speed limit – 10km/h and under – Camera recorded – Individual’. The second most frequent offence code had a similar description, but is over the 10km/h threshold, whereas the third most frequent is over the 20km/h threshold. This may indicate that it is more socially acceptable to speed 10km/h under compared to the set speed limit. It is important for the TfNSW to consider this analysis when implementing road rules, especially in terms of lowering speed offences across the state.

# **Analysis 3 – Captured by Radar or Camera**

Figure - Preferences Selected for Radar and Camera

Figure 4 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred outside of a school zone. Radar is often used by police or law enforcement to monitor vehicle speeds and are highly accurate when detecting objects. However, cameras operate automatically, can read precise shape of an object as well as automatically detect and issue traffic violations. Therefore, the data in Figure 4 is reasonable, as the number of cases captured on camera compared to radar is astronomically larger. Whether offences were captured by radar or camera, cases increased in the months July to December, compared to the beginning of 2015. It is important for the TfNSW to consider this analysis when implementing road rules, especially in terms of choosing between radar or camera.

# Chart, bar chart Description automatically generated**Analysis 4 – Mobile Phone Usage**

Figure - Preferences Selected for Mobile Phone Usage

Figure 4 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred outside of a school zone. Other than outliers, such as February, July and September, cases involving mobile phones occur three times per month. This may seem low; however, mobile phone cameras are limited in NSW. In the 21st century, mobile phones are considered an extension of self. As part of the 2026 Road Safety Action Plan, TfNSW plan to implement 45 new mobile detection cameras, which should increase the detecting of mobile usage offences. Despite the low number of cases associated with mobile phone usage, the TfNSW should still be wary of phone usage on NSW roads.

# **Analysis 5 – School Zone**

Figure - Number of School Zone Cases

Figure 6 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred within a school zone. Traffic penalties that occur within school zones are consistent across 12 months, fluctuating in the 300 to 400 range. However, January and December decrease to the 200 to 250 range. As terms for state schools across NSW start late January and run to early December, the data shown seems reasonable. The TfNSW should be wary of August and November, as traffic penalties spike during these times.

Chart, pie chart

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Figure - School Zone and Frequent Offence Codes

Figure 7 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred within a school zone. Cases occurring outside school zones do not differ in terms of the top three offence codes – 10km/h and under, 10km/h and over, as well as 20km/h. and over. This is concerning, as speed limits around school zones are reduced to 40km/h, rather than the standard 60km/h, in order to protect school aged children. From this analysis, it seems that it is socially acceptable to speed under 10km/h, whether the traffic offender is in a school zone or not. The TfNSW should make note of this analysis to further discourage speeding around areas with consistent and multiple pedestrians.

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Figure - School Zone Cases Captured by Camera and Radar

Figure 7 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred within a school zone. Cases occurring outside school zones do not differ in terms of using cameras over radars. However, frequency of cases being captured stay at a high level throughout the 12-month period, with camera and radar detection dropping significantly in January and December. Once again, the data is reasonable due to school start and end dates.

Chart, bar chart

Description automatically generatedFigure 8 displays cases that occurred between the 1st of January 2015 to the 1st of January 2016. Cases between the chosen dates occurred within a school zone. Cases occurring outside school zones do not differ in terms of mobile phone usage. Mobile phone associated cases are limited, but this is due to limited mobile phone cameras in NSW.

Figure - Mobile Phone Usage in School Zones