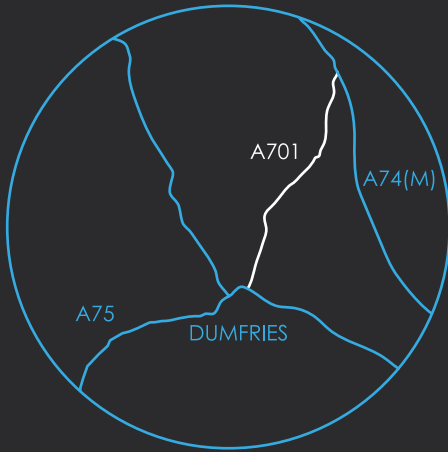


STRATEGIC ROAD SAFETY
A701 CLOSE FOLLOW

A701 Close Follow



The 18-miles of the A701 which connects Dumfries with the M74, was identified in Transport Scotland's Annual Road Safety Review as having a higher incidence of accidents than average trunk roads across South West Scotland.



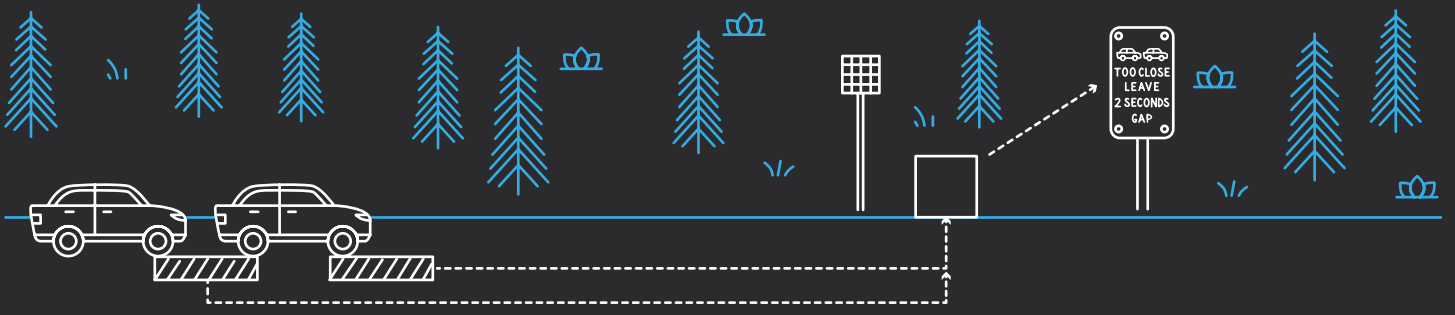
A 5-year (Jan 2013 to Dec 2017) retrieval of accident data for the 8.6mile 'Link' section between Amisfield and the single-lane St Ann's Bridge revealed a total of 27 injury



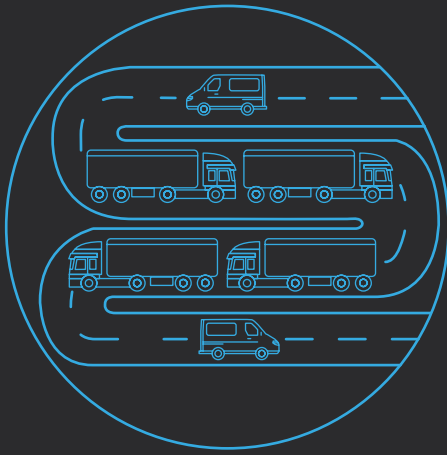
accidents. Whilst reviewing these factors it was noted that almost 73% of all 48 factors can be related directly to vehicle speed.



Factors including alcohol impairment, illness, and defective steering, fatigue and in-vehicle distraction were then discounted, leaving a total of 42 factors. Removing these caused an increase in speed-related factors, to 78.4%.



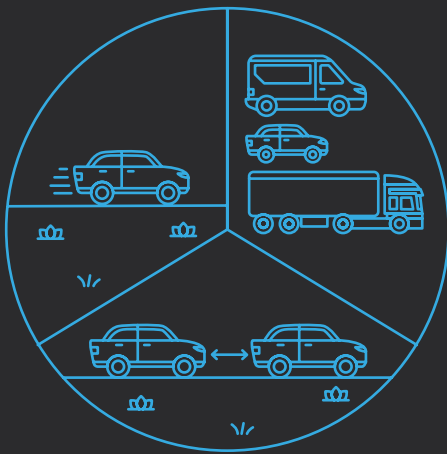
The project has taken the Strategic Road Safety team's ground-breaking A75 Vehicle Activated Signage (VAS) initiative in a new direction, delivering yet another application for this innovative, award-winning development. Inducted loops located in the trunk road, identify the specific vehicle-class and transmit this to digital signposts located 100m to 120m along the road, delivering bespoke messaging.



The team took into consideration the Vehicle Class, with the A701 reporting a substantially higher than average volume of HGVs and vans. Vehicles other than cars were also over represented in accident percentages.



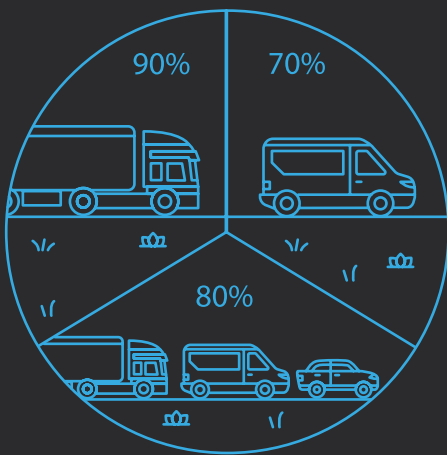
They carried out a week-long 24hour speed and headway survey at seven locations along the A701.



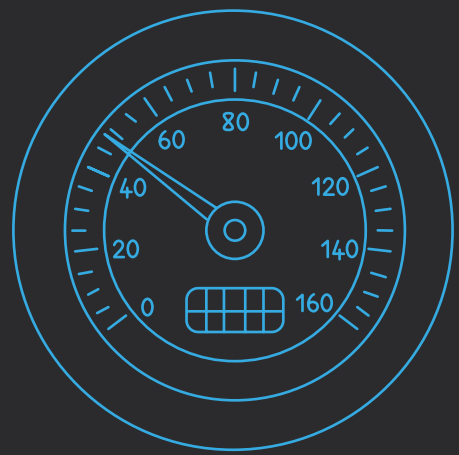
This research concentrated on Vehicle speeds, Vehicle class and Headway between vehicles.



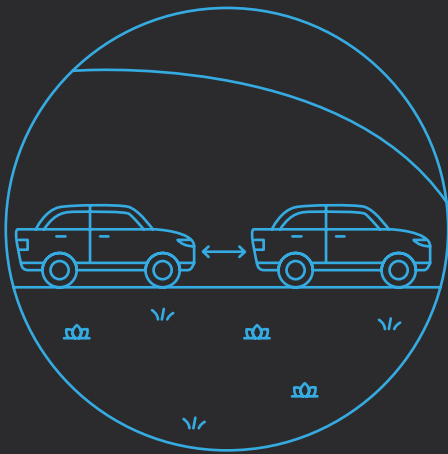
It was found that more than 90% of HGVs travelled significantly above the 40mph speed limit. On average the posted limit for this type of vehicle was exceeded by almost 20%.



It was also identified that over 70% of medium-sized goods vehicles (Class 4 – 6) were exceeding the average 50mph speed limit, with 80% of all such vehicles exceeding the limit by over 10% at sites 2 & 4.



With all other vehicles (Class 1-3), it was found that average speeds were below the national limit on this road. However, it can be assumed that some drivers will speed.



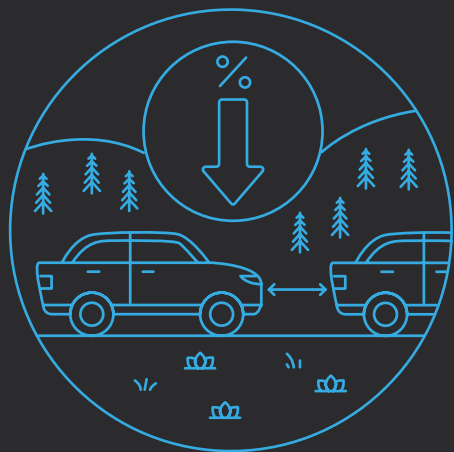
Further to our study on headway, it was found that smaller vehicle classes leave far less headway, with an average of 25% travelling at an inappropriate distance ie. 'close following'.



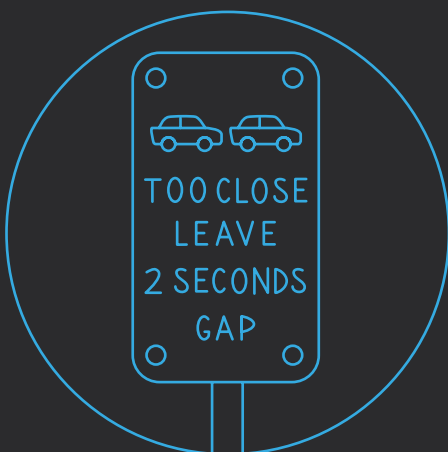
Previous research suggested that drivers struggle to estimate following distance accurately, and that by adopting time as a factor, are more prone to errors than using length (metres or car lengths) as a measure.



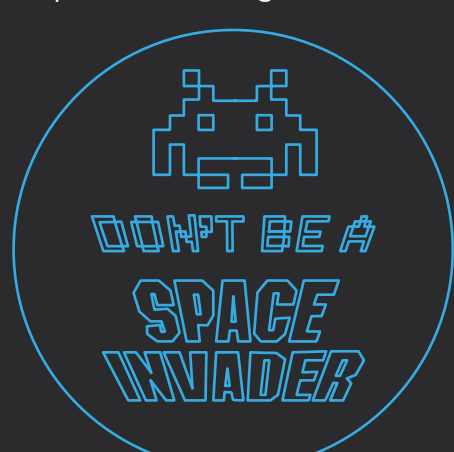
Detection loops identifying vehicle class (by axle width), speed and headway were installed. These were connected to 10 digital signs located 100m to 120m from the embedded loops.



The report showed that by providing in-vehicle feedback to drivers on immediate time headway (ie. the elapsed time between a lead vehicle and following vehicle passing a same point) their following distance increased.



Studies considered static signs advising against tailgating found positive behavioural changes in response to the signs. The design therefore displays the activated message 'Too Close, Please leave 2 second gap' to notify drivers of the gap between them and the vehicle in front. The signage also displays the Close Follow messages as well as speed limit notification.



It was important for the Strategic Road Safety team to align with authorities just over the border from Dumfries & Galloway. The programme is aligned to Highways England's 'Space Invaders' initiative, but provides a more hard-wired, practical element to address the 'Close Follow' issue.

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