

This document is based on an [AdBlock Leeds' blog post](#) about the impact of digital ads on drivers, which is a great summary of relevant evidence-based research about this. Below are grab-and-go points for writing into planning objections to digital ads.

[The impact of road advertising signs on driver behaviour and implications for road safety: A critical systematic review](#) - Oviedo-Trespalacios et al., 2019

- There is an emerging trend in the literature suggesting that roadside advertising can increase crash risk, particularly for those signs that have the capacity to frequently change (often referred to as digital billboards)
- The degree of changeability in the information conveyed by the roadside advertising signs appears to have a persistent adverse effect on driver behaviour
- It has been demonstrated that changeable (i.e., digital with multiple advertising signs) roadside advertising signs represent a greater distraction to drivers than static (i.e., single advertising sign) roadside advertising signs
- Many researchers have claimed that digital roadside advertising signs present a higher safety risk for the general public as the changes in luminance are more likely to catch a driver's attention than traditional static signs
- Digital roadside advertising signs also hold a driver's attention for longer than standard floodlit signs
- The researchers found that average glance duration at LED signs was longer when compared to other types of objects (i.e. anything the driver looked at for more than one second, including static, non-LED advertisements).

[Observed Driver Glance Behavior at Roadside Advertising Signs](#) - Beijer et al., 2004

- The number of glances was significantly lower for passive signs (0.64 glances per subject per sign) than for active signs (greater than 1.31 glances per subject per sign). The number of long glances was also greater for active signs than for passive signs.

[The Impact of Billboards on Driver Visual Behavior: A Systematic Literature Review](#) - Decker et al., 2015

- Active billboards drew more glances and more long glances (≥ 0.75 s, ≥ 2.0 s) than passive billboards but did not attract a longer average glance, and that there was large variability among individual billboards within categories (e.g., active vs. passive).

[A field study on the effects of digital billboards on glance behavior during highway driving](#) - Belyusar et al., 2016

- Results show a significant shift in the number and length of glances toward the billboards and an increased percentage of time glancing off road in their presence. Findings were particularly evident at the time the billboards transitioned between advertisements.

[Designing evidence-based guidelines for the safe use of digital billboard installations: Experience and results from Australia](#) - Roberts, 2013

- It is likely that the movement or changes in luminance created by digital displays will involuntarily capture attention and that particularly salient emotional and engaging material will recruit attention to the detriment of driving performance, particularly in inexperienced drivers.

[Driver attention is captured by roadside advertising signs](#) - Herrstedt et al., 2013

- The overall results of the empirical studies show that advertising signs do affect driver attention to the extent that road safety is compromised.