

Proposed District Plan Submission – SIGNS

Submitter: Dr Paul Van Houtte

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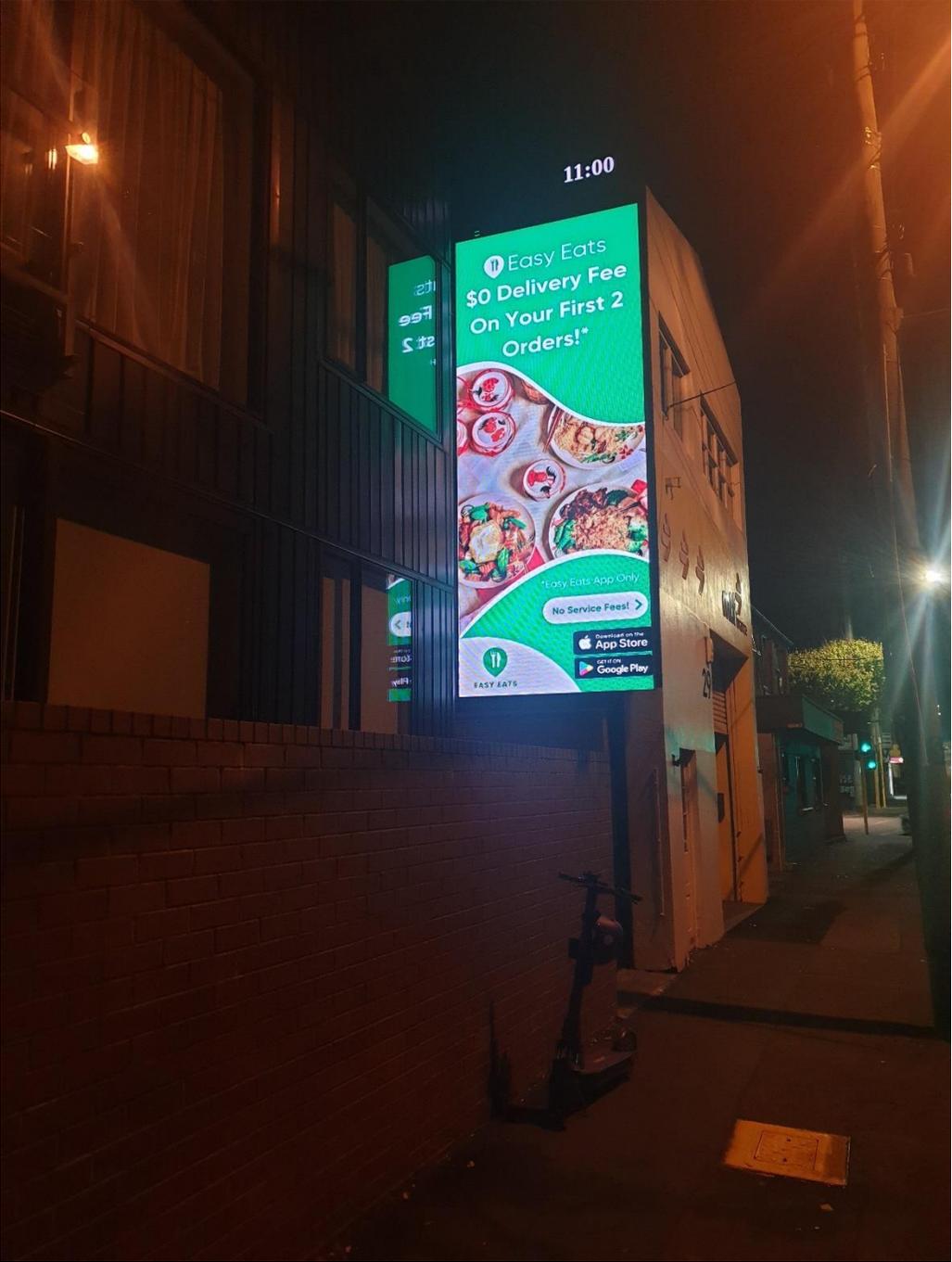
Appendix 1.



Appendix 2.



Appendix 3.



Appendix 4.



References

- Adam M, Al-Sharaa A, Ab Ghafar N, Mundher R, Abu Bakar S, Alhasan A. The Effects of Colour Content and Cumulative Area of Outdoor Advertisement Billboards on the Visual Quality of Urban Streets. *ISPRS International Journal of Geo-Information*. 2022 Dec 18;11(12):630.
- Brome R, Awad M, Moacdieh NM. Roadside digital billboard advertisements: Effects of static, transitioning, and animated designs on drivers' performance and attention. *Transportation research part F: traffic psychology and behaviour*. 2021 Nov 1;83:226-37.
- Costa M, Bonetti L, Vignali V, Bichicchi A, Lantieri C, Simone A. Driver's visual attention to different categories of roadside advertising signs. *Applied ergonomics*. 2019 Jul 1;78:127-36.
- Dukic T, Ahlstrom C, Patten C, Kettwich C, Kircher K. Effects of electronic billboards on driver distraction. *Traffic injury prevention*. 2013 Jul 4;14(5):469-76.
- Edquist J, Horberry T, Hosking S, Johnston I. Effects of advertising billboards during simulated driving. *Applied ergonomics*. 2011 May 1;42(4):619-26.
- Forest and Bird 2014. *New Zealand Seabirds: Important Bird Areas and Conservation*. The Royal Forest and Bird Protection Society of New Zealand, Wellington, New Zealand
- Gitelman V, Doveh E, Zaidel D. An examination of billboard impacts on crashes on a suburban highway: Comparing three periods—Billboards present, removed, and restored. *Traffic injury prevention*. 2019 Nov 25;20(sup2):S69-74.
- Gordon C. Reviewing how distraction involvement is coded in the New Zealand crash analysis system. 2009.
- Heswall A, Miller L, McNaughton EJ, Brunton-Martin AL, Cain KE, Friesen MR, Gaskett AC. 2022. Artificial light at night correlates with seabird groundings: mapping city lights near a seabird breeding hotspot. *PeerJ* 10:e14237 <https://doi.org/10.7717/peerj.14237>

Hinton J, Watson B, Oviedo-Trespalacios O. A novel conceptual framework investigating the relationship between roadside advertising and road safety: The driver behaviour and roadside advertising conceptual framework. *Transportation research part F: traffic psychology and behaviour*. 2022 Feb 1;85:221-35.

Interactive Advertising Bureau New Zealand. 2021 Programmatic Digital Out of Home A Buyer's Guide. Accessed at <https://www.rnz.co.nz/news/national/480248/outdoor-advertisers-using-smart-technology-to-reach-more-customers>

International Dark Sky Association 2019. "Guidance for Electronic Message Centers (EMCs)."

International Transport Forum 2024. "New Zealand: Road Safety Country Profile 2023", OECD Publishing.

Meuleners L, Roberts P, Fraser M. Identifying the distracting aspects of electronic advertising billboards: A driving simulation study. *Accident Analysis & Prevention*. 2020 Sep 1;145:105710.

Mollu K, Cornu J, Brijs K, Pirdavani A, Brijs T. Driving simulator study on the influence of digital illuminated billboards near pedestrian crossings. *Transportation research part F: traffic psychology and behaviour*. 2018 Nov 1;59:45-56.

Scott, M. 2022. Billboard infestation a sign of the times in Auckland. *Newsroom* 2022 Mar 24 [cited 2024 Mar 1] Available from: <https://newsroom.co.nz/2022/03/24/billboard-infestation-a-sign-of-the-times-in-auckland/>

Sheykhfard A, Haghighi F. Driver distraction by digital billboards? Structural equation modeling based on naturalistic driving study data: A case study of Iran. *Journal of safety research*. 2020 Feb 1;72:1-8.

Stavrinos D, Mosley PR, Wittig SM, Johnson HD, Decker JS, Sisiopiku VP, Welburn SC. Visual behavior differences in drivers across the lifespan: A digital billboard simulator study. *Transportation research part F: traffic psychology and behaviour*. 2016 Aug 1;41:19-28.

Talaat Y, Osman R. Prevalence of Billboards and its influence on urban quality of life-Based on Billboards installed on 90th North St, New Cairo. JES. Journal of Engineering Sciences. 2023 Jan 1;51(1):1-8.

Trick LM, Enns JT. A two-dimensional framework for understanding the role of attention selection in driving. In: Castro C, ed. *Human Factors of Visual and Cognitive Performance in Driving*. Boca Raton, FL: CRC Press; 2009, pp. 63–72.

Wakil K, Tahir A, Hussnain MQ, Waheed A, Nawaz R. Mitigating urban visual pollution through a multistakeholder spatial decision support system to optimize locational potential of billboards. ISPRS International Journal of Geo-Information. 2021 Feb 1;10(2):60.

Wundersitz L. Driver distraction and inattention in fatal and injury crashes: Findings from in-depth road crash data. Traffic injury prevention. 2019 Oct 3;20(7):696-701.

Yeung K. Five fears about mass predictive personalization in an age of surveillance capitalism. International Data Privacy Law. 2018 Aug 1;8(3):258-69.

Zielinska-Dabkowska KM, Xavia K. Global approaches to reduce light pollution from media architecture and non-static, self-luminous LED displays for mixed-use urban developments. Sustainability. 2019 Jun 22;11(12):3446.

Zuboff S. Big other: surveillance capitalism and the prospects of an information civilization. Journal of information technology. 2015 Mar;30(1):75-89.