



Submission on the Moreton Bay Regional Council Local Laws Review

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Thank you for the opportunity to comment on the Moreton Bay Regional Council Local Laws Review.

About the Centre for Air pollution, energy and health Research (CAR)

[CAR](#) is a Centre of Research Excellence funded by the National Health and Medical Research Council. The centre brings together more than 30 researchers at the forefront of their fields, based in seven of Australia's leading universities. CAR is the only group of its kind nationally to bring together researchers focusing on health impacts of air pollution, and new versus traditional forms of energy. The centre supports teams of researchers in the fields of epidemiology, exposure assessment, toxicology, chemistry, biostatistics and clinical respiratory medicine to pursue collaborative projects and to develop their capacity. Our centre's vision for a healthier community is the driving force behind our research.

CAR is facilitating and translating research on moving to alternative, renewable forms of energy that have the most beneficial (or least detrimental) impacts on the economy, environment and health, considering a technology's life cycle. CAR researchers and affiliates have been involved in numerous publications relating to the health impacts of air pollution in Australia. For example, this year CAR researchers published an assessment of the health-related impacts of long-term exposure to human-made particulate matter (PM), and found impacts cost the Australian economy an estimated AUD\$6.2 billion annually (Hanigan et al 2021).

Comments

1. What issues do you have relating to Local Law matters?

We strongly support the current local laws on fires, as articulated in the *Moreton Bay Regional Council Subordinate Local Law No.3 (Community and Environmental Management) 2011*. at Part 4 section 7 (Prohibition on lighting or maintaining fires in the open – Authorising local law, s 15(2)). We support the current local laws on fires given the existing scientific evidence on the health impacts of smoke and smoke-related air pollution.

Recent scientific evidence concludes that adverse health effects resulting from particulate matter exposure occur even at low levels (Hanigan et al 2019). As such, there is no safe level

of smoke exposure in terms of human health. Health effects from poor air quality include death due to, and exacerbations of, cardiovascular disease, respiratory disease, metabolic disease and neurological disease (Landrigan et al 2018).

While minimal research has been conducted on the air quality impacts of fire pits, recent evidence on wood heater smoke suggests the smoke-related health impacts could be substantial. For example, one study in Tasmania concluded that particulate matter from wood heater smoke was responsible for approximately 69 deaths, 86 hospital admissions, and 15 asthma emergency department visits *every year*, with associated annual costs of AUD\$293 million (Borchers-Arriagada et al 2020).

2. What ideas do you have to resolve these issues?

We urge the Moreton Bay Regional Council to maintain its current laws that prohibit the use of fire pits on health grounds. We oppose the introduction of laws that would permit the use of backyard fire pits for urban residential dwellings.

References

Borchers-Arriagada, N., Palmer, A.J., Bowman, D.M.J.S., Williamson, G.J., Johnston, F.H. (2020). Health impacts of ambient biomass smoke in Tasmania, Australia. *International Journal of Environmental Research and Public Health*. 17(9): 3264.
DOI: 10.3390/ijerph17093264

Hanigan, I.C., Broome, R.A., Chaston, T.B., Cope, M., Dennekamp, M. et al (2021). Avoidable mortality attributable to anthropogenic fine particulate matter (PM_{2.5}) in Australia. *International Journal of Environmental Research and Public Health*. 18(1): 254.
DOI: 10.3390/ijerph18010254

Hanigan, I.C., Rolfe, M.I., Knibbs, L.D., Salimi, F., Cowie, C.T. et al (2019). All-cause mortality and long-term exposure to low level air pollution in the '45 and up study' cohort, Sydney, Australia 2006-2015. *Environment International*. 126, 762-770.
DOI: 10.1016/j.envint.2019.02.044

Landrigan, P.J., Fuller, R., Acosta, N.J., Adeyi, O., Arnold, R., et al (2018). The Lancet Commission on pollution and health. *Lancet*. 3;391(10119): 462-512.
DOI: 10.1016/S0140-6736(17)32345-0

For more information

This submission has been produced by the Centre for Air pollution, energy and health Research (CAR).



For more information about CAR and our work in the health impacts of air pollution: contact us at car@sydney.edu.au or visit our website: www.car-cre.org.au