

# A survey of the smokefree status of pedestrian-only spaces in 10 New Zealand local government areas

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## ABSTRACT

**AIM:** To describe the smokefree status and signage of outdoor pedestrian-only plazas/malls/boulevards in 10 New Zealand local government (council) areas.

**METHODS:** The 10 council areas were a convenience sample. Council websites were examined for smokefree policies, and a systematic attempt was made to identify the five largest pedestrian-only sites with permanent seating in each council area (10 sites each for two larger cities). Field visits were conducted to all selected sites during January–May 2021.

**RESULTS:** Smokefree policies with components covering smokefree outdoor plazas/malls/boulevards were common (80%; 8/10 councils), albeit with some gaps (eg, around signage and vaping policy). A total of 60 relevant pedestrianised sites with permanent seating were identified and surveyed. Of these, 63% were officially designated smokefree. Smokefree signage was only present in 15% (9/60) of all the sites and in 24% (9/38) of the designated smokefree sites. In these designated sites, the average number of smokefree signs was only 1.4 (range: 0 to 14). Issues identified with the signs included small size, being only a small part of a larger other sign, limited use of te reo Māori wording and not covering vaping. At sites where tables were present, 12% had ash trays on the tables (none at smokefree sites).

**CONCLUSIONS:** Smokefree plazas/malls/boulevards in this survey had multiple policy and signage deficiencies that are inconsistent with achieving the national Smokefree 2025 goal. There is scope to address these issues with an upgrade to the national smokefree law.

One mechanism to make progress towards reducing the enormous health burden from tobacco smoking is to expand smokefree public areas. For many high-income countries, this now means an increased focus on outdoor public settings, where smokefree policies are much less common than for indoor public settings. Such policies are intended to reduce the exposure of workers and the public to tobacco-smoke pollution and contribute to the denormalisation of smoking by reducing its visibility.<sup>1,2</sup> A perception of smokefree parks or outdoor dining policies has been associated with increased quit attempts,<sup>3</sup> and not being exposed to smoking in Ontario bar/restaurant outdoor areas increased quit attempts and decreased smoking relapses.<sup>4</sup> In New York, smokefree policies for parks and beaches were followed by reduced

tobacco-related litter, observed smoking and public perceptions of smoking.<sup>5,6</sup> In the Netherlands, the introduction of an inner-city outdoor smokefree zone was associated with a substantial decline in the number of smokers in the zone.<sup>7</sup>

There is often majority public support for a number of types of outdoor smokefree areas (eg, based on surveys in the USA and Canada,<sup>8</sup> Spain,<sup>9</sup> Australia<sup>10,11</sup> and the UK<sup>12</sup>). There is even majority support for some outdoor smokefree areas by smokers (eg, in New Zealand,<sup>13</sup> Spain,<sup>9</sup> Italy,<sup>14</sup> Australia<sup>11</sup> and North America<sup>8</sup>).

Internationally, the most progress towards outdoor smokefree policy has generally been achieved in areas explicitly associated with children (eg, schools, playgrounds, urban parks),<sup>15</sup> with some movement in outdoor hospitality areas (eg, outside bars

and cafés).<sup>16</sup> However, smokefree policies for central urban pedestrian areas have increased in California<sup>17</sup> and some larger Australian cities.<sup>18</sup> New York has smokefree policies for “Pedestrian plazas such as those at Times Square and Herald Square.”<sup>19</sup>

In New Zealand, exposure to second-hand smoke is a serious problem associated with an estimated 347 premature deaths per year in 2019.<sup>20</sup> When morbidity from this smoke is also considered, this health loss amounted to an estimated 9,022 lost disability-adjusted life years (DALYs) in 2019.<sup>20</sup> Fortunately, there has been some progress with voluntary or “educational” outdoor smokefree areas over the last two decades.<sup>21–23</sup> Nevertheless, various issues have been identified in terms of the extent of coverage and quantity/quality of the signage (eg, hospitality settings,<sup>24</sup> schools,<sup>25</sup> children’s playgrounds,<sup>26</sup> hospital grounds,<sup>27</sup> racecourses and sports facilities,<sup>28</sup> railway stations,<sup>29</sup> airports<sup>30</sup> and various other settings<sup>31</sup>). These limitations are problematic in the context of the country’s Smokefree 2025 goal, which aims for fewer than 5% of New Zealanders to be smokers by 2025.<sup>32</sup>

Despite the research mentioned above, there has been little work in New Zealand on evaluating the extent of smokefree pedestrian-only areas (plazas/malls/boulevards). In 2019, 12 months after the adoption of a smokefree policy in Rotorua’s pedestrian Eat Street, a local hospitality hub, a count found relatively few people smoking (0.6% of those observed; 36/6530; personal communication). The measurement of the prevalence of smoking in a few such places has occurred in Wellington, either before or after the adoption of smokefree policies.<sup>33,34</sup>

Given this background and the revived New Zealand Government interest in progressing tobacco control,<sup>35,36</sup> in this study we aimed to describe the smokefree status and signage of outdoor pedestrian-only plazas/malls/boulevards in 10 New Zealand local government (council) areas. Smokefree status includes whether the local authority has designated the area smokefree and whether ash trays are present on dining/drinking tables in the area, including temporary tables associated with cafés, restaurants and pubs. Councils sometimes prohibit ash trays on tables used by cafés, restaurants and pubs on public land.

## Methods

*Sample selection:* The 10 council areas were a convenience sample based on where the authors lived and their travel plans (from north to south, the areas were: Hastings, Napier, Palmerston North, Masterton, South Wairarapa, Porirua, Upper Hutt, Hutt City and Wellington in the North Island and Queenstown Lakes in the South Island). A systematic attempt was made to identify all the outdoor pedestrian-only plazas/malls/boulevards on public land with permanent seating in these council areas. We then selected the five largest of these (measured by paved/gravel area) within each council area (or 10 in the case of councils with 100,000+ populations: Wellington and Hutt City).

*Smokefree policies:* The website of each council was examined in May 2021 to identify the smokefree policy. Key features of each policy were documented, particularly how it related to the selected sites.

*Site inclusion criteria:* For the purposes of this study, we used the following definitions for site inclusion in the survey:

- An “outdoor plaza with seating” was an outdoor area that was at least 50% paved or gravel surfaced, had some distinguishing structures to prevent vehicle access (eg, bollards or planter boxes) and had at least one permanent seat. In some cases, these plazas were still officially called “parks” (eg, Grey Street Pocket Park in Wellington City). Also, we identified plaza areas within larger park settings, where the plaza was well defined by surrounding structures. Where a plaza or boulevard was an extended area (or series of connected areas) of the footpath, we required that the area including the extension was at least twice the width of the nearest normal width of footpath. We took a broad interpretation of seating that included seating with no back support (eg, concrete block or wooden benches that could be sat on).
- A “pedestrianised mall/boulevard” was defined as an outdoor area that was fully pedestrianised for its entire width, was wider than a typical footpath and had at least one permanent seat.

*Site identification:* For each local authority, the following steps were performed up to May 2021:

- We examined Google Maps and Google Street View and undertook our own observations within each council area to identify all relevant sites.
- We examined the local authority website for smokefree policies, and for the areas designated as smokefree. These policies typically included mention of specific pedestrianised plazas, malls and boulevards (for references to website links, see Table 1).
- We conducted a Google search to identify news items around smokefree areas within each city. For example, some documents specifically identified city plazas (eg, for Hastings<sup>37</sup>).
- Sites that were outside of a council's jurisdiction were excluded (eg, on private land, university and hospital campuses and parts of national monuments, etc). We also excluded any of the potential sites if construction was underway at the time of the field visit.

*Data collection at site visits:* On field visits to each site, we identified the presence or absence of the features required for inclusion (see site inclusion criteria above). For sites meeting such criteria, we then collected these data:

- The presence of all smokefree and vape-free signage (with photographs taken of all signs). For the study, we did not include data on smokefree signage that met our definition of low-visibility (ie, under 10cm by 10cm in size and on a sign over two meters above the ground). We also did not include smokefree signage on temporary tables at the site.
- The presence or absence of dining/drinking tables, including temporary ones associated with cafés, restaurants and pubs. Temporary tables were included so as to provide a full denominator for all tables (with and without ash trays).
- The presence or not of ash trays on any of the tables or special bins for cigarette butts.

Three sites were examined by two authors together to confirm the feasibility of the

definitions and methods. Then the rest of the sites were examined by one of the authors alone, albeit with site photographs examined by the other authors. All site visits were conducted during business hours to ensure that any cafés/restaurants and pubs would have any tables set up outside. The field survey covered the period 2 January 2021 to 13 May 2021.

## Results

Of the 10 councils, all had details of smokefree outdoor policies on their websites (Table 1). There was also evidence of specific commissioned research on the topic that had been published.<sup>38</sup> The average time since the smokefree policy was last updated was four years (ie, in 2017; range 2006 to 2020; Table 1). Policies with components covering smokefree outdoor plazas/malls/boulevards were common (80%; 8/10 councils), with the policy of one of the remainders (South Wairarapa) being classified as “unclear.” Only Queenstown Lakes had no component of the pedestrian-only plazas/malls/boulevards covered. But only five councils (50%) included a vape-free policy for the outdoor areas covered. Most councils (80%) had some policy around smokefree signage. In three of these (30%), the signage policy specifically mentioned signage in te reo Māori, but only two mentioned vape-free signage. The Hutt City policy specifically stated: “Signage does not include a ‘no vaping’ message”.

A total of 60 relevant pedestrianised sites with permanent seating were identified and surveyed (52 plazas, six malls and two boulevards; Table 2). As per the sample method, this meant five sites each for Hastings, Napier, Palmerston North, Masterton, South Wairarapa, Porirua, Upper Hutt and Queenstown Lakes, and ten each for Hutt City and Wellington. Of these, 63% were officially designated smokefree in the council's smokefree policy. Smokefree signage was only present in 15% (9/60) of the total sites and in 24% (9/38) of the designated smokefree sites. In these designated sites, the average number of smokefree signs was 1.4 (range: 0 to 14; Table 2). In the sites with smokefree signage, 44% had at least some signs with te reo Māori wording (eg, Figure 1) and 22% had some signs where the smokefree message was just part of a larger sign (eg, Figure 2). There were no vape-free signs at any of the sites and

no signs mentioned any enforcement details (eg, telephone numbers for complaints). Qualitative issues included some very small smokefree signs (under 10 cm by 10 cm in area; Figure 2), and some signs were located where the intent was unclear (eg, on the side of a building where the sign could potentially be interpreted as indicating a smokefree indoor area).

At sites where tables were present, 12% had ash trays on the tables. But none of the designated smokefree sites had ash trays present on the tables.

## Discussion

A key finding of this survey was that all the 10 councils had details of smokefree outdoor policies on their websites and most (80%) of these policies had components that covered smokefree outdoor plazas/malls/boulevards (Table 1). Nevertheless, out of the 60 pedestrianised sites with permanent seating that we examined, only 63% were officially designated smokefree as per the council website policy (and in some cases this status was unclear or just applied to part of the site). Furthermore, only 24% of the designated smokefree sites had any smokefree signage. This signage was often suboptimal in terms of size, extent and quality. Also, 12% of sites had tables with ash trays, which send a potentially problematic, pro-smoking signal.

These various problems that we found are inconsistent with the New Zealand Government's Smokefree Aotearoa 2025 goal,<sup>32</sup> as indeed are the extensive limitations with other outdoor smokefree areas in the country (see the introduction). They are also inconsistent with local government efforts to make their localities more attractive to workers, shoppers and tourists; to have a healthier and more productive population;<sup>48</sup> and to improve the environment with reduced tobacco-related pollution, litter and cleaning costs.<sup>49</sup>

Given these problems, there is a case for an upgrade to national smokefree legislation, as is used for indoor public and workplaces. Such legislation appears to have worked well for another type of outdoor area in New Zealand (eg, school grounds throughout the country<sup>23</sup>), and a national approach has recently been taken with smokefree vehicles.<sup>50</sup> In contrast to local

government initiatives, national legislation has the advantage of providing consistent messaging throughout the country, allowing for integration with national smokefree media campaigns and for economies of scale from centralised sign production/distribution. Specific features of a new national law smokefree law that encompassed these sites could state:

- All outdoor pedestrianised plazas, malls and boulevards that have any permanent seating are smokefree and vape-free (along with a 10-metre zone from their boundaries).
- All these sites are required to have smokefree signage that meet minimum government specifications (ie, for number of signs per area, size, use of te reo Māori and messaging including “no vaping”).

Nevertheless, until a national approach is adopted, local government can still take additional initiatives to upgrade their smokefree policies and build them into bylaws. The range of approaches for the use of locally based laws for smokefree outdoor areas in New Zealand has been detailed previously.<sup>51</sup>

A strength of our study was that it appears to be the first survey (to our knowledge) of the smokefree status these type of outdoor pedestrianised areas in Australasia. Study limitations include the sample of just 10 council areas (out of a potential 67 territorial authorities in the country) and the sample being a convenience one, owing to this being an unfunded study. Also, within the council areas, it is possible that we may have missed identifying some of the largest 5–10 sites, owing to our mechanisms for identifying them (eg, via Google Maps, Google Street View and local observations).

In summary, smokefree plazas/malls/boulevards in this survey had multiple policy and signage deficiencies that are inconsistent with achieving the national Smokefree 2025 goal. There is scope to address these issues and others highlighted in research on smokefree outdoor policies in Aotearoa, and scope for a major upgrade to the national smokefree law to help de-normalise smoking and to help ex-smokers be smokefree. This fundamental move on smokefree policies would be in line with the innovative ideas in the New Zealand Government's Proposals for a Smokefree 2025 Action Plan.<sup>35</sup>

**Table 1:** City councils (CC) and district councils (DC) in the sample and how their smokefree policies at May 2021 related to outdoor pedestrian-only plazas/malls/boulevards.

Council (north to south) (reference to smoke-free policy)	Year last updated	Covers outdoor plazas or malls/boulevards in some way	Policy details signage requirements or mentions (for any outdoor smokefree area)	Comment on specifics that may related to pedestrian-only plazas/malls/boulevards
Napier CC <sup>39</sup>	2016	Yes	“Signage promoting positive smokefree messages will be installed in appropriate places.”	The smokefree policy includes: “Council owned urban parks, sportsgrounds, playgrounds and reserves, excluding beach reserves”; “Areas set up primarily for café or dining purposes on publicly-owned land; and Council owned tables in public areas.” It is unclear whether the non-café table part of Market St is considered to be an urban park. However, the smokefree signs on the wooden council seating suggests that the council intends this area to be smokefree, so this is how we treated this site in our analysis.
Hastings DC <sup>39</sup>	2016	Yes	See above	See above (policy combined with Napier CC one). Also specifically covered is: “Hastings City Square / Central Plaza.”
Palmerston North CC <sup>40</sup>	2020	Yes	“Council will provide Smokefree/ Auahi kore and vape-free signage for all places designated ‘smokefree’ and ‘vape-free’ under this policy.”	The policy states smokefree/vape-free for: “streets in the city centre” and “parks and playgrounds”.
Masterton DC <sup>41</sup>	2017	Yes	“This policy will be implemented through the placement of smokefree signs at designated non-smoking areas.”	The smokefree policy covers: “MDC owned parks”, “council owned seating in public areas” and “areas set up primarily for café or dining purposes in publicly owned land”. “Purpose of the Smokefree Policy is to reduce the visibility of smoking in the Masterton district and promote a clean, safe, healthy environment for our community.”
South Wairarapa DC <sup>42</sup>	2015	Unclear	Not mentioned	The smokefree policy covers: council owned buildings, council swimming pools, coastal reserves and a stadium and “Any other facility considered to be controlled by the Council”. The policy is intended to “protect the community and in particular all persons working in or around Council owned or controlled buildings and facilities”. The Greytown Town Centre is covered, but this is a building, not an outside area. It is unclear whether “facilities” controlled by the council include other outdoor spaces that are not specifically mentioned in the policy.
Porirua CC <sup>43</sup>	2019	Yes	“Signage will be provided in English and Te Reo reflecting our bi-lingual signage policy. Relevant Managers will review our properties, parks, playgrounds etc and identify what additional signage is needed in new and existing smokefree areas.”	The Council smokefree policy covers “City Centre/Cobham Court” and “Within 10 metres of the entrance to Council owned facilities, including but not limited to [amongst others]: council administration building; Pātaka Art + Museum/main library; Te Rauparaha Arena/Aquatic Centre Complex.” “For the purpose of this policy e-cigarettes and vaping are treated as tobacco products and as such are banned in smokefree areas.”



**Table 1:** City councils (CC) and district councils (DC) in the sample and how their smokefree policies at May 2021 related to outdoor pedestrian-only plazas/malls/boulevards (continued).

Council (north to south) (reference to smoke-free policy)	Year last updated	Covers outdoor plazas or malls/boulevards in some way	Policy details signage requirements or mentions (for any outdoor smokefree area)	Comment on specifics that may related to pedestrian-only plazas/malls/boulevards
Upper Hutt DC <sup>44</sup>	2020	Yes (in city centre)	“The focus for signage is firstly on areas where children and families congregate or socialise, and areas where smoking rates are high. Implementation of the policy includes signage and messaging in Te Reo Māori.” “Signage will include a ‘no vaping’ message where appropriate”; “signage... [will] include cessation support messaging where appropriate”.	Policy includes: “Within nine metres of outdoor public areas around Council buildings and facilities”, “Outdoor dining and drinking areas on footpaths”, “Outdoor public areas in the city centre”. “Council, through its publicity and communication, asks that people not vape in smokefree spaces or at smoke-free events.”
Hutt CC <sup>45</sup>	2019	Yes	“The focus for signage is firstly on the most popular areas, areas where children and families congregate or socialise, and areas where smoking rates are high. Implementation of the policy includes signage and messaging in Te Reo Māori.” “The Council, through its publicity and communication, asks that people not vape in smokefree spaces or at smokefree events. Signage does not include a ‘no vaping’ message.”	Policy includes: “Parks” “Outdoor pavement dining areas; Suburban centres and the CBD.” “Outdoor public areas around Council buildings and facilities... Outdoor pavement dining areas”.
Wellington CC <sup>46</sup>	2019	Yes	“Provide signs in smokefree outdoor spaces where it is practical to do so, and in line with best practice for Council signs and effective smokefree signs.”	“Civic Precinct and Civic Square (including all public entrances) - All public entrance ways out to 10 meters”, “Grey Street pocket park” (ie, the “pedestrian area between Grey Street and Lambton Quay”). Laneways: includes Eva Street, Leeds Street, Egmont Street and parts of “Chew’s Lane”, “Midland Park” and “Waitangi Park”. “The Council asks that people not vape in smokefree spaces or at smokefree events.”
Queenstown Lakes DC <sup>47</sup>	2006	No	Not mentioned	The smokefree policy was adopted in 2006 and covers council-owned playgrounds, sports fields and swimming pools. Therefore, none of the identified pedestrian-only plazas/malls/boulevards with permanent seating were officially designated as smokefree. A new policy is being drafted (in 2021) and the council trialled smokefree and vape-free waterfronts in Queenstown, Frankton, Glenorchy and Wanaka from 16 December 2019 to 31 March 2020 as part of the development of a new, comprehensive smokefree policy.

**Table 2:** Results for pedestrianised sites (plazas/malls/boulevards) in the 10 council areas (with site specific details available on request from the authors).

Variable	Key result	Numbers	Additional details
<b>Designated smokefree status by site type</b>	<b>% smokefree</b>		
Plazas	65.4%	34/52	
Malls	50.0%	3/6	
Boulevard	50.0%	1/2	
Total of the above sites	63.3%	38/60	One was only partially smokefree (eg, just the area with tables).
<b>Ash trays</b>	<b>%</b>		
Ash trays when tables present	12.0%	3/25	5 of these 25 tables were temporary tables. There were no ash trays at designated smokefree sites.
<b>Smokefree signage</b>	<b>% or number</b>		
Any smokefree signs at all the sites	15.0%	9/60	
Any smokefree signs at designated smokefree sites	23.7%	9/38	
Average number of signs in designated smokefree sites	1.4 signs		Median=0; range=0 to 14 per site. There was a statistically significant difference in signage presence between designated smokefree sites and non-designated sites (p=0.015, 1-tailed test; Kruskal-Wallis test).
<b>For sites with any smokefree signs</b>	<b>% or number</b>		
Average number of different types of signs per site	1.7 signs		Median=1, range=1 to 4 per site.
Presence of any signs with any te reo Māori wording	44.4%	4/9	Mean of 2.1 signs in te reo per site; median=0, range=0 to 14 per site. These included a sign with just “Aotearoa” as the only word in te reo. See Figure 1 for an example.
Presence of any smokefree signs that were part of other signs	22.2%	2/9	See Figure 2 for an example.
Presence of any signs also banning vaping	0.0%	0/9	
Presence of any signs that refer to enforcement details (eg, telephone number for complaints or fines)	0.0%	0/9	

**Figure 1:** Example of a relatively large smokefree sign with a clear “no smoking” symbol and prominent use of te reo Māori wording (photograph by the second author).





**Figure 2:** Example of a type of a very small smokefree sign included in this study, with this also being part of a much larger sign for another purpose (the smokefree symbol is in the lower right side of the sign; photograph by the second author).



**Competing interests:**

Although one of the authors (NG) works for Te Hīringa Hauora/Health Promotion Agency, this research work was performed independently and none of the views expressed in this article necessarily reflect the views of this agency or the New Zealand Government.

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