

# SUSTAINABILITY, CITIES AND SUBNATIONAL TAXATION: AN ANALYSIS OF AUCKLAND AND BRISBANE

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## ABSTRACT

Treaties on environmental sustainability are concluded between nation states but, faced with the domestic political realities of taxing or otherwise acting against the short-term interests of voters, national governments often engage unwillingly with their international obligations. The Trump administration's resiling from the *Paris Agreement* on climate change is an egregious example of flouting of national obligations but Australia and New Zealand have also been slow to give effect to their promises to reduce carbon omissions. Conversely, political subdivisions, including cities, can make their own distinct contributions to sustainability through various measures, including taxes. Megacities, such as London and Sydney, are sufficiently large to have the potential to engage with climate change in ways comparable to many countries. Smaller cities, including Auckland and Brisbane, can also make a contribution to sustainability. Focusing on the use of subnational taxes, this article considers whether, in practice, they do.

## I. INTRODUCTION

Grand undertakings on environmental sustainability are negotiated and made between nation states,<sup>1</sup> but, in practice, countries may engage unwillingly with their treaty obligations. The political realities of curbing the emissions of vocal domestic interest groups commonly impact on implementation.<sup>2</sup> The Trump administration's withdrawal from the *Paris Agreement* on climate change<sup>3</sup> presents an egregious example of shirking from

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<sup>1</sup> See, in particular, the *United Nations Framework Convention on Climate Change*, opened for signature 3 June 1992, 1771 UNTS 107 (entered into force 21 March 1994).

<sup>2</sup> See, for example, 'Anti-carbon tax rally hits Australian parliament' *The Guardian* (online), 16 August 2011 <<https://www.theguardian.com/world/2011/aug/16/anti-carbon-tax-rally-australia>>. Generally, see Ian Bailey, 'Global Commons, Domestic Decisions: The comparative Politics of Climate Change' (2012) 6(2) *Carbon and Climate Law Review* 174.

<sup>3</sup> *Paris Agreement*, opened for signature 22 April 2016, [UNTS number not available] (entered into force 4 November 2016).

international obligations,<sup>4</sup> but Australia and New Zealand have also been laggards in giving effect to their promises on sustainability.<sup>5</sup> Notwithstanding this apparent unwillingness to implement effective measures at a national level, political subdivisions,<sup>6</sup> including cities,<sup>7</sup> can make their own distinct contributions to sustainability through initiatives which included green taxes.

The 1972 *United Nations Conference on the Human Environment* was the first attempt to coordinate worldwide action to combat environmental degradation.<sup>8</sup> From this starting point, the role of cities has been considered crucial. Thus principle 15 of the conference report provides: 'Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social economic and environmental benefits for all.'<sup>9</sup> The *United Nations Conference on Environment and Development* was convened in 1989,<sup>10</sup> and the 1992 *United Nations Conference on Environment and Development* ('UNCED'),<sup>11</sup> which led to the adoption of Agenda 21.<sup>12</sup> As Stephen Knight observes, 'UNCED recognised local government as a major contributor to this 'bottom-up' blueprint for sustainable development'.<sup>13</sup> Programme areas for Agenda 21 include promoting sustainable land-use planning and management,<sup>14</sup> and energy and transport systems.<sup>15</sup> Seeking to promote community-level observance of Agenda 21, 'Local Agenda 21 is a process which facilitates sustainable development at community

<sup>4</sup> See, for example, Mythili Sampathkumar, 'The US president wants to 'renegotiate' a more 'fair' deal for the US' *The Independent* (online), 2 June 2017 <<http://www.independent.co.uk/news/world/americas/us-politics/trump-paris-agreement-climate-change-withdrawal-latest-news-updates-global-warming-deal-a7768116.html>>.

<sup>5</sup> See generally Alexander Gillespie and William CG Burns (eds), *Climate Change in the South Pacific: Impacts and Responses in Australia, New Zealand, and Small Island States* (Kluwer Academic, 2000).

<sup>6</sup> On the variance between United States policies at federal and state levels, see Robert H Frank, 'Federal Policy Will Shift. Not All States Will Shift With It', *The New York Times* (online), 20 January 2017. (Exceptionally long URLs for sources, such as those of *The New York Times*, have been omitted from this article.) On the benefits to be gained by regions and cities pursuing green energy, see Stuart A Thompson and Vikas Bajaj, 'The Green Energy Revolution Will Happen Without Trump' *The New York Times* (online), 20 June 2017.

<sup>7</sup> See Climate Mayors, *Cities adopt the Paris Climate Agreement* (2017) <<http://climatemayors.org/>>.

<sup>8</sup> Held at Stockholm, 5 to 16 June 1972.

<sup>9</sup> *Report of the United Nations Conference on the Human Environment* (United Nations, 1972) 5 <<http://www.un-documents.net/aconf48-14r1.pdf>>.

<sup>10</sup> GA res 44/228 of 22 December 1989.

<sup>11</sup> Held at Rio de Janeiro, 3 to 14 June 1992.

<sup>12</sup> *United Nations Conference on Environment and Development*. As adopted by the Plenary in Rio de Janeiro, 14 June, 1992 ('Agenda 21').

<sup>13</sup> Stephen Knight, 'Agenda 21 in New Zealand: Not Dead, Just Resting' (2000) 7(4) *Australian Journal of Environmental Management* 213, 213. See also Valerie Kupke, 'Local Agenda 21: Local Councils Managing For The Future' (1996) 14(3) *Urban Policy and Research* 183.

<sup>14</sup> Agenda 21, above n 12, [7.5.c.].

<sup>15</sup> *Ibid*, [7.5.e.]

level. It is an approach based on participation which respects the social, cultural, economic and environmental needs of the present and future citizens of a community in all its diversity and which relates that community and its future to the regional, national and international community of which it is a part.<sup>16</sup> The growing importance of local government to environmental protection was further recognised by Habitat II,<sup>17</sup> when ‘participating nations made a commitment to the objective of decentralising both authority and resources’.<sup>18</sup>

Most recently, through Habitat III,<sup>19</sup> United Nations members have recognised ‘the power of cities and towns, which will constitute up to 70 per cent of the world population by 2050, to be the engine for sustainable growth in the future’.<sup>20</sup> C40 megacities,<sup>21</sup> which include London and Sydney,<sup>22</sup> are sufficiently large to have the capacity to engage with climate change in ways comparable to many countries.<sup>23</sup> Smaller cities, such as Auckland and Brisbane, can also make a contribution to sustainability through measures which include green taxes. But do they?

This article uses the examples of Brisbane and Auckland to consider the contribution cities, smaller than megacities, might make to sustainability, in particular, through local taxation. Auckland and Brisbane are plausible comparators. Both promote themselves as sustainable cities. In addition to having similarly-sized populations,<sup>24</sup> the cities unusually have a unitary council governance structure, but are limited in their scope of action by their constitutional status in centralised British heritage countries. The article is limited to a consideration of

<sup>16</sup> Ian Douglas and Philip James, *Urban Ecology: An Introduction* (Routledge, 2015) 342.

<sup>17</sup> *United Conference on Human Settlements*, held in Istanbul, June 1996. The first such conference, Habitat (later Habitat I), was held in Vancouver from 31 May to 11 June 1976 and led to *The Vancouver Declaration on Human Settlements* <[https://unhabitat.org/wp-content/uploads/2014/07/The\\_Vancouver\\_Declaration\\_19761.pdf](https://unhabitat.org/wp-content/uploads/2014/07/The_Vancouver_Declaration_19761.pdf)>.

<sup>18</sup> David Mercer and Benjamin Jotkowitz, ‘Local Agenda 21 and Barriers to Sustainability at the Local Government Level in Victoria, Australia’ (2000) 31(2) *Australia Geographer* 163, 163.

<sup>19</sup> United Nations, *Habitat III New Urban Agenda, Quito Declaration on Sustainable Cities and Human Settlements for Us All* (2016) <<http://habitat3.org/wp-content/uploads/Habitat-III-New-Urban-Agenda-10-September-2016.pdf>>.

<sup>20</sup> *UN conference agrees new urban development agenda creating sustainable, equitable cities for all* (2016) <<http://www.un.org/sustainabledevelopment/blog/2016/10/un-conference-agrees-new-urban-development-agenda-creating-sustainable-equitable-cities-for-all/>>.

<sup>21</sup> From the perspective of C40 Cities, a ‘Megacity’ has a population in excess of three million; a metropolitan area population in excess of 10 million; or has a GDP in the top 25 for cities worldwide. See *C40 Announces New Guidelines for Membership Categories* (2012) <[http://c40-production-images.s3.amazonaws.com/press\\_releases/images/25\\_C40\\_20Guidelines\\_20FINAL\\_2011.14.12.original.pdf?1388095701](http://c40-production-images.s3.amazonaws.com/press_releases/images/25_C40_20Guidelines_20FINAL_2011.14.12.original.pdf?1388095701)>.

<sup>22</sup> See *Climate Action in Megacities 3.0* (2015) <<http://cam3.c40.org/#/main/home>>.

<sup>23</sup> See generally Ernest J Yanarella and Richard S Levine, *The City as Fulcrum of Global Sustainability* (Anthem Press, 2011).

<sup>24</sup> The population of Auckland was approximately 1.415 million at the time of the 2013 census. See Auckland Council, *Census in Auckland* (2017) <<http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/reports/Pages/censusinaucklandhome.aspx>>. In 2016, 1.131 million people lived in Brisbane (local government area). See *2016 Census QuickFacts* (2017) <[http://www.censusdata.abs.gov.au/census\\_services/getproduct/census/2016/quickstat/LGA31000?opendocument](http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/LGA31000?opendocument)>.

factors which are plausibly within the control of a city authority. Electricity generation, which is typically produced and distributed at a state or national level, is one of the greatest contributors to greenhouse gases worldwide<sup>25</sup> but largely lies beyond the control of local authorities. Likewise, roading policy, which is the other principal cause of atmospheric carbon emission,<sup>26</sup> is often set at a national or state level. Nevertheless, a city can usually affect how and how far people travel within it. Furthermore, urban sustainability considerations can be reduced to the population density of a city, and that is a matter over which cities can exercise considerable influence.

After outlining the particular concept of sustainability used in this article, subnational taxes which may promote that goal are identified. The extent to which Brisbane and Auckland have used such taxes is then considered. Vienna is then introduced as a third comparator because it is a similarly-sized city to Auckland and Brisbane, and is commonly cited as a model of a sustainable city. Conclusions are then drawn.

## II. SUSTAINABILITY, SUSTAINABLE CITIES, AND SUSTAINABILITY-PROMOTING TAXES

This part of the article seeks to answer three basic questions, the answers to which will inform the discussion that follows, namely: what is meant by the contestable term ‘sustainability’; what is a ‘sustainable city’; and which subnational taxes promote sustainability and sustainable cities?

### A. *What Is ‘Sustainability’?*

Sustainability is commonly approached in a trifurcate way: from the perspectives of people (social sustainability), profit (economic sustainability) and planet (environment sustainability).<sup>27</sup> Habitat III casts a wide net for urban sustainability, and takes into account ‘challenges in terms of housing, infrastructure, basic services, food security, health, education, decent jobs, safety, and natural resources among others’.<sup>28</sup> However, in the interests of analytical manageability, this article focuses on the concept of environmental sustainability enunciated in the United Nations’ 1987 *Brundtland Report*,<sup>29</sup> although it is recognised that, if cities are to survive, they must also meet people’s social needs and be

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<sup>25</sup> See *Sources of Greenhouse Gas Emissions* (2017) <<https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>>.

<sup>26</sup> Ibid.

<sup>27</sup> See, for example, Kelsey Nowakowski, ‘Sustaining Our Cities’ (2017) 231(5) *National Geographic* 9.

<sup>28</sup> Habitat III, above n 19, [2].

<sup>29</sup> United Nations, Report of the World Commission on Environment and Development: Our Common Future (1987) (‘Brundtland Report’) <<http://www.un-documents.net/wced-ocf.htm>>.

economically resilient.<sup>30</sup> The *Brundtland Report* defines ‘sustainability’ as ‘[d]evelopment that meets the needs of the present generation without compromising the ability of future generations to meet their own needs’.<sup>31</sup> Australia’s *National Strategy for Ecologically Sustainable Development* similarly defines ‘ecologically sustainable development’ (ESD) as ‘using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased’.<sup>32</sup> Sustainability, in this sense, concerns the just distribution of resources among current and future generations.<sup>33</sup> In short, one group in society, nation or generation should not consume today or in the future an inequitable amount of non-renewable resources.<sup>34</sup>

### B. What Is a ‘Sustainable City’?

Sustainability can be a slippery concept, especially when applied to cities. For Kim Dovey, it ‘is one of the great empty signifiers of our era; it is difficult to debate because no one is suggesting an unsustainable city’.<sup>35</sup> Nevertheless, urban planners and designers broadly agree ‘[t]he compact city – with development grouped around public transport, walking, and cycling – is the only environmentally sustainable form of city’.<sup>36</sup> Its counter image is ‘the profoundly unsustainable ... city of low-density suburbs, freeways and shopping malls with almost universal car ownership and free parking’.<sup>37</sup> More specifically, Peter Newman and Jeffrey Kenworthy identify the measures for a sustainable city as: ‘energy and air quality; water, materials, and work; land, green spaces, and biodiversity; transportation; liveability, human amenities, and health’.<sup>38</sup>

<sup>30</sup> ‘Urban Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.’ See *The EU Resilience Prospectus* <<http://100resilientcities.org/wp-content/uploads/2017/10/100RC-06LR.pdf>>.

Neither Auckland nor Brisbane are members of the group of 100 Resilient Cities: see *Our Cities* (2017) <<http://www.100resilientcities.org/cities/>>.

<sup>31</sup> *Brundtland Report*, above n 29, chapter 2.

<sup>32</sup> See Australian Government, *Ecologically sustainable development* <<http://www.environment.gov.au/about-us/esd>>.

<sup>33</sup> Compare with the ‘deep ecology’ critique of Brundtlandian sustainability presented by Arne Naess and others. See, for example, Arne Naess, *Ecology, Community and Lifestyle: Outline of an Ecosophy* (David Rothenberg, trans, Cambridge University Press, 1989) [trans of: *Okologi, Samfunn og Livsstil* (first published 1973)].

<sup>34</sup> What intergenerational equity in distribution of non-renewable resources might look like in practice is a matter for a debate which lies beyond the scope of this article. For a discussion of the major relevant issues, see Emilio Padilla, ‘Intergenerational Equity and Sustainability’ (2002) 41 *Ecological Economics* 69; Catherine J Iorns Magallanes, ‘Foreword: New Thinking on Sustainability’ (2015) 13 *New Zealand Journal of Public & International Law* 1.

<sup>35</sup> Kim Dovey, *Urban Design Thinking: A Conceptual Toolkit* (Bloomsbury Academic, 2016) 253.

<sup>36</sup> Richard Rogers, ‘Foreword’ in Jan Gehl, *Cities for People* (Island Press, 2010) ix, ix.

<sup>37</sup> Dovey, above n 35, 253.

<sup>38</sup> Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities: Overcoming Automobile Dependence* (Island Press, 1999) 18.

### C. Which Factors Militate Against Sustainable Cities?

According to Newman and Kenworthy, the automobile is ‘a fundamental cause of unsustainability in cities’.<sup>39</sup> Cars cause pollution in the inner-city and enable excessive spatial growth, commonly known as ‘sprawl’.<sup>40</sup> The principal determinant of a sustainable city is its population density (number of people per square kilometre) – also referred to as ‘intensity’ and ‘compactness’. Despite anomalous examples of population intensification having negative sustainability consequences,<sup>41</sup> people in densely populated cities tend to walk, cycle and use public transport more than people in less dense cities.<sup>42</sup> Furthermore, ‘the carbon emissions of different cities correlate strongly with relative densities’.<sup>43</sup> Consequently, ‘any equitable global pact on climate change’ requires ‘transformational change in car-dependant cities in order to reduce emissions to a small fraction of current levels’.<sup>44</sup>

### D. Which Factors Shape Sustainable Cities?

Transportation priorities greatly determine the sustainability of a city.<sup>45</sup> In broad terms, the key issue is the extent to which automobile infrastructure is privileged relative to public transport,<sup>46</sup> cycling and walking. In the post-war period, following the lead of North America,<sup>47</sup> Australasian cities, including Auckland and Brisbane, were shaped by the automobile. Graeme Davison uses Reyner Banham’s neologism ‘Autopia’ to describe these

<sup>39</sup> Ibid, 64.

<sup>40</sup> On sprawl as excessive spatial growth, see Jan K Brueckner and Hyun-A Kim, ‘Urban Sprawl and the Property Tax’ (2003) 10 *International Tax and Public Finance* (2003) 5, 5. Pamela Blais describes sprawl as ‘suburbanisation as market failure’. See Pamela Blais, *Perverse Cities: Hidden Subsidies, Wonky Policy and Urban Sprawl* (UBC Press, 2010) 77. While urban planners and designers almost universally oppose excessive suburbanisation, Wilbur Thompson argues use of the word ‘sprawl’ can be ‘little more than a color word which reflects (betrays?) the speaker’s bias in favour of high population density and heavy interpersonal interaction – his “urbanity”’. See Wilbur Thompson, ‘The City as a Distorted Price System’ in Richard T LeGates and Frederic Stout (eds) *The City Reader* (Routledge, 4<sup>th</sup> ed, 2007) 266, 268.

<sup>41</sup> See Elizabeth Burton, ‘The Compact City: Just or Just Compact? A Preliminary Analysis’ (2000) 37(11) *Urban Studies* 1969, 1974.

<sup>42</sup> Rogers, above n 36, ix.

<sup>43</sup> Dovey, above n 35, 254.

<sup>44</sup> Ibid.

<sup>45</sup> See generally Jeffrey R Kenworthy, ‘The Eco-City: Ten Key Transport and Planning Dimensions for Sustainable City Development’ (2006) 18(1) *Environment and Urbanization* 67.

<sup>46</sup> Newman and Kenworthy, above n 38, 27.

<sup>47</sup> Los Angeles and Houston are commonly considered to be the prime examples of the automobile-centric city. See Edward Glaeser, *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier* (Penguin, 2012). Jane Jacobs is greatly credited with preventing New York from going the same way. See Jane Jacobs, *The Death and Life of Great American Cities* (Penguin Books, first published 1961, 1964).

cities.<sup>48</sup> 'Low-density housing became more feasible, and as a reaction to the industrial city, town planners began separating residential and business sectors by zoning. This also helped to increase journey distances. The city began to decentralize and disperse.'<sup>49</sup> For Davison:<sup>50</sup>

Mass motorisation was a kind of Faustian bargain. It promised its followers much, but the promises were often negated by unanticipated consequences in their fulfilment. By attempting to universalise individual mobility the car created congestion. By building freeways to bring communities closer together it often endangered the cohesion of the communities themselves.

Other determinants of urban sustainability include economic priorities, in particular, 'how new suburban infrastructure enables greenfield growth to occur rather than redevelopment and renewal of present urban areas'.<sup>51</sup> Banks' lending practices may also be relevant, notably their reported unwillingness to accept mortgages over small apartments.<sup>52</sup> Furthermore, cultural priorities may be important, especially perspectives on urban space.<sup>53</sup> For example, in Australasia, the suburban ideal of a quarter acre block is a persistent desideratum.<sup>54</sup> Finally, ideology can affect urban compactness because house owner-occupancy is typically a political priority in property-owning democracies,<sup>55</sup> such as Australia and New Zealand.

#### E. Which Taxes Promote Sustainable Cities?

To effectively promote sustainability in cities, policies should encourage compactness and reduce car dependence.<sup>56</sup> Compactness makes travel by foot, bicycle and public transport more likely. However, if 'increasing densities are not accompanied by reduced car dependence, the result is an increase in congestion ... combined with the potential loss of both public and private green space to subdivision and new construction'.<sup>57</sup> Population

<sup>48</sup> 'Autopia' was one of the four ecologies of Los Angeles Banham identified: see Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (University of California Press, 2001). Like Utopia, Autopia is both ideal and dystopic.

<sup>49</sup> Newman and Kenworthy, above n 38, 33.

<sup>50</sup> See Graeme Davison with Sheryll Yelland, *Car Wars: How the Car Won our Hearts and Conquered our Cities* (Allen & Unwin, 2004) xii.

<sup>51</sup> Newman and Kenworthy, above n 38, 27.

<sup>52</sup> See, for example, Bridget Carpenter, 'Buyers boxed in by cautious banks unwilling to lend for studio apartments' *The Australian* (online), 8 March 2011 <<http://www.theaustralian.com.au/news/nation/buyers-boxed-in-by-cautious-banks-unwilling-to-lend-for-studio-apartments/news-story/f5ae553f9f859c65d52cc45cee370a96>>.

<sup>53</sup> Newman and Kenworthy, above n 38, 27.

<sup>54</sup> See Jon Kellett, 'The Australian quarter acre block: the death of a dream?' (2011) 82(3) *Town Planning Review* 263.

<sup>55</sup> See, generally, Martin O'Neill and Thad Williamson (eds), *Property-Owning Democracy: Rawls and Beyond* (Wiley, 2012).

<sup>56</sup> See Jan Gehl, *Cities for People* (Island Press, 2010) 68.

<sup>57</sup> Robin Kearns and Damian Collins, 'Children in the intensifying city: Lessons from Auckland's walking school buses' in Brendan Gleeson and Neil Sipe, *Creating Child Friendly Cities: reinstating kids in the city* (Routledge, 2006) 105, 107.

density has, then, qualitative as well as quantitative aspects. It is essential, for example, that compact cities include attractive public spaces,<sup>58</sup> and heritage buildings are preserved.<sup>59</sup>

Various types of subnational taxes may promote compaction and discourage private car use in the inner city. First, property taxes, which are levied on unimproved land value, rather than capital value, are predicted to discourage sprawl.<sup>60</sup> For followers of Henry George,<sup>61</sup> it is axiomatic that land taxes are a paragon of efficiency.<sup>62</sup> Second, taxes can be used to increase the price of private car use to compensate for externalities,<sup>63</sup> and to negate perverse subsidies.<sup>64</sup> Third, congestion charges,<sup>65</sup> punitive tolls for single occupancy vehicles,<sup>66</sup> high parking fees,<sup>67</sup> and so forth, may be used to discourage private car use, to combat pollution and reduce carbon emissions.<sup>68</sup> Fourth, tax revenues, such as those from fuel taxes or tolls,<sup>69</sup> may be hypothecated to fund public transport projects.<sup>70</sup>

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<sup>58</sup> See Gehl, above n 56, 68.

<sup>59</sup> On the difficulties of preserving heritage buildings when cities densify, see Steven C Bourassa, 'The Political Economy of Land Value Taxation' in Richard F Dye and Richard W England (eds), *Land Value Taxation: Theory, Evidence, and Practice* (Lincoln Institute of Land Policy, 2009) 195, 196.

<sup>60</sup> See H Spencer Banzhaf and Nathan Lavery, 'Can the Land Tax Help Curb Urban Sprawl? Evidence from Growth Patterns in Pennsylvania' (2010) 67 *Journal of Urban Economics* 169. See also Wallace E Oates and Robert M Schwab, 'The Impact of Urban Land Taxation: The Pittsburgh Experience' (1997) 50(1) *National Tax Journal* 1; and Richard W Landholm, 'Twenty-One Land Value Taxation Questions and Answers' (1972) 31(2) *American Journal of Economics and Sociology* 153.

<sup>61</sup> See Henry George, *Progress and Poverty; an Inquiry into the Cause of Industrial Depressions and of Increase of Want with Increase of Wealth; the Remedy* (The Modern Library, first published 1879, 1938,).

<sup>62</sup> For the proposal of 'tax incremental local transfers' on overcoming NIMBYism in relation to efficient use of urban land, see David Schleicher, 'City Unplanning' (2013) 122 *Yale Law Journal* 1670.

<sup>63</sup> Newman and Kenworthy, above n 38, 184.

<sup>64</sup> See, generally, Blais, above n 40.

<sup>65</sup> Sean D Beevers and David C Carslaw, 'The impact of congestion charging on vehicle emissions in London' (2005) 39 *Atmospheric Environment* 1, 4.

<sup>66</sup> Newman and Kenworthy, above n 38, 205.

<sup>67</sup> Ibid.

<sup>68</sup> Blais, above n 40, 195.

<sup>69</sup> A fuel levy is problematic. As wealthier people buy relatively expensive electric vehicles, a greater burden of a fuel levy will fall on less wealthy drivers of petrol or diesel-powered vehicles. See Andrew Ward, 'Fuel duty taxes face £170billion hit from electric cars' *Financial Times* (online), 26 June 2017 <<https://www.ft.com/content/0dc01356-58b9-11e7-9bc8-8055f264aa8b?mhq5j=e7>>.

<sup>70</sup> Newman and Kenworthy, above n 38, 184.

### III. COMPARATOR CITIES

This part of the article provides basic information about the comparator cities, starting with an overview of their constitutional positions and taxing powers. It is then considered whether Auckland and Brisbane, do in practice, use their taxing powers to promote sustainability.

#### A. Auckland

Auckland has been recognised as a C40 innovator city;<sup>71</sup> the city is also a member of the International Council for Local Environmental Initiatives which describes itself as ‘the leading global network of more than 1,500 cities, towns and regions committed to building a sustainable future’.<sup>72</sup>

##### 1. Local government in New Zealand

New Zealand has two tiers of government, central and local.<sup>73</sup> The latter has no formal constitutional status.<sup>74</sup> The *Local Government Act 2002* (NZ) provides for territorial, regional and unitary authorities. Most districts have a territorial authority and a regional authority. Regional authorities perform cross boundary functions, such as those relating to the environment, transport, and civil defence, whereas territorial authorities are concerned with land use, public health, and planning. Regional and territorial authorities are functionally distinguished; they are not in a hierarchical relationship. Knight observes ‘regional councils tend to concentrate on biophysical issues while district and city councils see their roles in land management, economic monitoring and social issues’.<sup>75</sup>

In Auckland, seven territorial authorities and the regional authority, were merged into a unitary council, commonly referred to as the ‘super city’ in 2010.<sup>76</sup> Local government is often conceived as an instrument for achieving the goals of central government.<sup>77</sup> There is no

<sup>71</sup> An ‘innovator city’ does not qualify as a Megacity ‘but have shown clear leadership in environmental and climate change work’. See *Auckland* (2017) <<http://www.c40.org/cities/auckland>>.

<sup>72</sup> *Who we are* <<http://www.iclei.org/about/who-is-iclei.html>>.

<sup>73</sup> The short-lived provinces were disestablished in the interest of coherent central government. See Michael King, *The Penguin History of New Zealand* (Penguin Books, 2003) 232.

<sup>74</sup> See Geoffrey Palmer and Andrew Butler, *A Constitution for Aotearoa New Zealand* (Victoria University Press, 2016) 188.

<sup>75</sup> Stephen Knight, ‘Agenda 21 in New Zealand: Not Dead, Just Resting’ (2000) 7(4) *Australian Journal of Environmental Management* 213, 219.

<sup>76</sup> For a discussion of the formation of the super city and its ensuing problems, see Grant Duncan, ‘Auckland Council is it too big to last?’ (2016) 12(4) *Policy Quarterly* 54.

<sup>77</sup> See Philip McDermott, ‘A View from the Antipodes: Comparing the Lombard and New Zealand Ways of Governance’ in Alessandro Colombo (ed), *Subsidiarity Governance: Theoretical and Empirical Models* (Palgrave Macmillan, 2012) 73, 79.

tradition of devolution of power from central to local government, although, by virtue of its relative size and economic significance,<sup>78</sup> Auckland enjoys a degree of practical autonomy.

## 2. Local taxes

New Zealand is distinguished by the relative simplicity of its national tax system.<sup>79</sup> This aversion to fiscal complexity extends to local taxes. Since the country is a unitary state, no state or provincial-level taxes exist. Stamp duty or other property transfer tax, which is often the preserve of the intermediate level of government,<sup>80</sup> is not levied.<sup>81</sup>

Rating, which is a tax on the value of real property, is the principal source of revenue for local authorities in New Zealand.<sup>82</sup> The rate is calculated by multiplying the property value (land, capital or annual value) by a rating charge.<sup>83</sup> Rates income is supplemented by regulatory income and a petrol tax, grants from central government, interest and dividends, and sales and other operating income.<sup>84</sup> Due to its significant investments,<sup>85</sup> rates make up only 42 per cent of Auckland's operating income.<sup>86</sup> Up to 30 per cent of rates revenue may be derived

<sup>78</sup> For the year ending March 2016, Auckland contributed 37.2 percent of New Zealand's gross domestic product. See Stats NZ, *Regional Gross Domestic Product: Year ended March 2016* (2017) <[http://www.stats.govt.nz/browse\\_for\\_stats/economic\\_indicators/NationalAccounts/RegionalGDP\\_HOTPYeMar16.aspx](http://www.stats.govt.nz/browse_for_stats/economic_indicators/NationalAccounts/RegionalGDP_HOTPYeMar16.aspx)>.

<sup>79</sup> The PWC-World Bank survey of ease of paying taxes ranks New Zealand at 11<sup>th</sup> place, behind countries such as Qatar which does not levy personal taxes. See PWC World Bank, *Paying Taxes 2017* (2017) <<https://www.pwc.com/gx/en/paying-taxes/pdf/pwc-paying-taxes-2017.pdf>>.

<sup>80</sup> See, for example, the *Duties Act 2001* (Qld).

<sup>81</sup> Only an approved issuer levy remains of stamp duty: see *Stamp and Cheque Duties Act 1971* (NZ) ss 86F-86L.

<sup>82</sup> See Stats NZ, *Government Finance Statistics (Local Government): Year ended June 2015* (17 June 2016) <[http://www.stats.govt.nz/browse\\_for\\_stats/government\\_finance/local\\_government/GovernmentFinanceStatisticsLocalGovernment\\_HOTPYeJun15.aspx](http://www.stats.govt.nz/browse_for_stats/government_finance/local_government/GovernmentFinanceStatisticsLocalGovernment_HOTPYeJun15.aspx)>.

<sup>83</sup> See Local Government (Rating) Act 2002 (NZ), s 13.

<sup>84</sup> Department of Internal Affairs Local, *Council funding* (2011) <[http://www.localcouncils.govt.nz/lgip.nsf/wpg\\_url/About-Local-Government-Local-Government-In-New-Zealand-Council-funding](http://www.localcouncils.govt.nz/lgip.nsf/wpg_url/About-Local-Government-Local-Government-In-New-Zealand-Council-funding)>.

<sup>85</sup> The city's principal investments are Ports of Auckland Ltd (100 per cent owned), Auckland International Airport Ltd (22.4 per cent owned) and Auckland Film Studios Ltd (100 per cent owned). See *Auckland Council Investments Limited* (2017) <[http://www.aucklandcouncil.govt.nz/EN/AboutCouncil/representativesbodies/CCO/Pages/council\\_investments.aspx](http://www.aucklandcouncil.govt.nz/EN/AboutCouncil/representativesbodies/CCO/Pages/council_investments.aspx)>.

<sup>86</sup> Suzanne Tindal and John Bishop, *Auckland Council – Investor Update* (2016) <<http://www.aucklandcouncil.govt.nz/EN/AboutCouncil/businessandconomy/Documents/investorupdateoctober2016.pdf>>.

from user charges related to property.<sup>87</sup> A targeted water rate may also be charged.<sup>88</sup> Local authorities may raise development contributions to recover a portion of capital costs incurred when they provide infrastructure services for a new development.<sup>89</sup> According to Matt Adams and Ralph Chapman:<sup>90</sup>

roading and water supply costs fall with increasing density ... public services can be delivered more efficiently (economically, socially and environmentally) at higher density, up to a point. The overall picture of costs falling with density provides support to those councils espousing and following 'smart growth' plans that seek to utilise the excess capacity in existing infrastructure as opposed to continuing dispersed development. It may also help underpin the setting of higher development contributions for areas sprawling away from established infrastructure.

Auckland Council does not use development charges to direct sustainable outcomes, such as intensified development, rather these levies are used 'to recover from those persons undertaking development a fair, equitable, and proportionate portion of the total cost of capital expenditure necessary to service *growth* over the long term'.<sup>91</sup>

### 3. *A missed opportunity for a sustainable Auckland*

Auckland faces the natural disadvantage of its location on a narrow isthmus which encourages an elongated, linear urban footprint. Yet, in the 1930s, the city was planned to be a compact urban centre, served by electrified rail links. The émigré Austrian architect and designer, Ernst Plischke,<sup>92</sup> strongly influenced this plan 'for a more geographically compact and intensively settled Auckland, bound together by a cheap and efficient public

<sup>87</sup> A charge can be a fixed amount, universal annual general charges ('UAGC') payable in respect of each rateable unit, or a targeted rate for particular activities identified in a local authority's funding impact statement, such as waste removal: see *Local Government (Rating) Act 2002* (NZ), s 15. For the 2017-18 rating year, Auckland charges a flat UAGC of NZD404. See Auckland Council, *Changes in property rates for 2017-2018 rating year* (2017) <<https://beta.aucklandcouncil.govt.nz/property-rates-valuations/Pages/changes-rates-bills-this-year.aspx>>.

<sup>88</sup> *Local Government (Rating) Act 2002* (NZ), s 20. For details of volumetric water charges in Auckland see Watercare, *Domestic water and wastewater charges and IGC* (2017) <[https://www.watercare.co.nz/SiteCollectionDocuments/AllPDFs/Domestic\\_Charges.pdf](https://www.watercare.co.nz/SiteCollectionDocuments/AllPDFs/Domestic_Charges.pdf)>.

<sup>89</sup> See *Local Government Act 2002* (NZ), pt 8, subpt 5, as amended by the *Local Government Act 2002 Amendment Act 2014* (NZ).

<sup>90</sup> Matt Adams and Ralph Chapman, 'Do Denser Urban Areas Save on Infrastructure? Evidence from New Zealand territorial authorities' (2016) 12(4) *Policy Quarterly* 63, 69.

<sup>91</sup> See Auckland Council, *Financial Policies: Contributions Policy* (2015) 2 <<http://www.aucklandcouncil.govt.nz/EN/ratesbuildingproperty/developmentfinancialcontributions/Documents/2015contributionpolicy.pdf>> (emphasis added).

<sup>92</sup> See Linda Tyler, *Plischke, Ernst Anton*, Te Ara - the Encyclopedia of New Zealand (2007) <<https://teara.govt.nz/en/biographies/5p31/plischke-ernst-anton>>.

transportation network'.<sup>93</sup> According to Chris Trotter, the plan was 'deliberately scrapped by the National Party' after the Second World War.<sup>94</sup> Trotter argues:<sup>95</sup>

When the post-war development scheme diverged from earlier models was in its preference for highways and motorways over railways. The private automobile, not the electrified rail unit, would provide the principal mode of transportation in the new sub-urbanised society, which a new breed of housing entrepreneur was fast bringing to life.

Today, Auckland has 'a high level of car dependence, and underdeveloped public transport system and residential intensification'.<sup>96</sup> In Trotter's words, it is an 'anarchic, automobile-inspired, socially-dislocated sprawl'.<sup>97</sup> To a degree, urban planners are seeking to remodel the city in ways resembling Plitschke's abandoned blueprint.<sup>98</sup> But, as Robin Kearns and Damian Collins observe, 'the likelihood of truly de-prioritizing motor vehicles in our cities remains slim. The pro-car lobby maintains a firm grip on most city planning processes including Auckland's'.<sup>99</sup>

#### 4. Use of taxes

Before the amalgamation of the seven councils to form the super city, only Franklin District Council used capital value as its rating base;<sup>100</sup> Auckland City Council and Manukau City Council used annual value;<sup>101</sup> whereas the majority (Northshore City Council, Papakura District Council, Rodney District Council and Waitakere District Council) used land value.<sup>102</sup> The merged council adopted capital value as its rating base. A capital base may make sense if the focus is on population, rather than efficient land use.<sup>103</sup> Nevertheless, the retreat from

<sup>93</sup> Chris Trotter, *No Left Turn: The Distortion of New Zealand's History by Greed, Bigotry and Right-Wing Politics* (Random House New Zealand, 2007) 205. Chris Harris's research provides the basis for Trotter's analysis. See, for example, Chris Harris, 'Lost City: Forgotten Plans for an Alternative Auckland' (Paper presented at the 2<sup>nd</sup> International Conference on Sustainability Engineering and Science, Auckland, February 2007) <<http://www.thesustainabilitysociety.org.nz/conference/2007/papers/HARRIS-Lost%20City.pdf>>.

<sup>94</sup> Trotter, above n 93, 205. The *Town and Country Planning Act 1926* (NZ), which applied a 50 per cent betterment tax on the sale of land-holdings adjoining urban boundaries, was abolished by the National government (1949-57).

<sup>95</sup> Ibid, 218.

<sup>96</sup> Kearns and Collins, above n 57, 106.

<sup>97</sup> Trotter, above n 93, 205.

<sup>98</sup> See Auckland Council, *The Auckland Plan* (2017) [564] <<http://theplan.theaucklandplan.govt.nz/urban-auckland/>>.

<sup>99</sup> Kearns and Collins, above n 57, 117.

<sup>100</sup> See *General revaluation 2011* <<https://www.parliament.nz/resource/0000212250>>.

<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

<sup>103</sup> Blais, above n 40, 194.

land value for the majority of the city's councils would be seen by Georgists,<sup>104</sup> at least, as a lost opportunity to encourage densification.

Beyond rating, Auckland has no other taxing powers and central government, which has been traditionally reluctant to devolve fiscal powers to local government,<sup>105</sup> may not be willing to grant more extensive powers. Despite the political implausibility of the proposal, Len Brown, the first mayor of the super city (2010-16), called for a local income tax to alleviate the burden on asset rich, income poor ratepayers.<sup>106</sup> Phil Goff, the current mayor, was rebuffed in his proposal for local tourist levy but a form of tourist tax has been implemented by levying a higher rate against hotels and motels than other commercial buildings.<sup>107</sup> Since such differentiation, based on 'the use to which the land is put', can bring some flexibility to the rating system,<sup>108</sup> policymakers could use the narrow range of fiscal tools at their disposal to promote sustainability. For example, rating differentiation could be used to promote sustainable use of land, for example, by charging rates based on population density. Auckland does not do this.

As noted, Auckland charges for water on a volumetric basis. Otherwise, taxes appear to be seen purely as revenue raising devices, rather than instruments for modifying behaviour or to prompt sustainable outcomes. However, at the time of writing, a congestion charge is under consideration for Auckland but whether central government will grant the council requisite powers is unclear.<sup>109</sup> Congestion has a major impact on Aucklanders' productivity and is estimated to cost almost NZD 2 billion a year.<sup>110</sup> Beyond economic benefits, decongestion should reduce the city's carbon emissions.<sup>111</sup> A congestion charge would also

<sup>104</sup> Rolland O'Regan claims land based rating was established in New Zealand before George was known in the country. See Rolland O'Regan, *Rating in New Zealand* (Baranduin Publishers, 2<sup>nd</sup> ed, 1985)

<sup>105</sup> See Local Government Rates Inquiry, *Funding Local Government: Report of the Local Government Rates Inquiry* (Department of Internal Affairs, 2007) chapter 11.

<sup>106</sup> See 'Brown's bold tax plan' *North Shore Times* (online), 6 March 2014 <<http://www.stuff.co.nz/national/politics/9796451/Browns-bold-tax-plan>>.

<sup>107</sup> Bernard Orsman, 'Goff's 'bed tax' for Auckland hotels approved' *The New Zealand Herald* (online), 1 June 2017 <[http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11867655](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11867655)>.

<sup>108</sup> See *Local Government (Rating) Act 2002* (NZ), s 14 and sch 2, cl 1.

<sup>109</sup> Isaac Davison, 'Road tolls for Auckland a step closer, as Govt sets up team to investigate congestion charging' *The New Zealand Herald* (online), 4 June 2017 <[http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=11869538](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11869538)>. Auckland has also requested a regional fuel levy, which was rejected by the National-led government (2008-17) but is likely to be more plausible under a Labour-led government.

<sup>110</sup> See Christina Leung, Killian Destremau, Daniel Pamudi and Michael Bealing, *Benefits from Auckland road decongestion* (2017) <<https://www.ema.co.nz/resources/EMA%20Reports%20and%20Documents/Advocacy/Submissions/NZIER%20report%20on%20Auckland%20Benefits%20of%20Decongestion.pdf>>.

<sup>111</sup> See Ian Wallis and David Lupton, *The Costs of Congestion Reappraised* (Research Report 489, New Zealand Transport Agency, 2013).

demonstrate a willingness to use fiscal tools to direct people's behaviour towards sustainable outcomes.

## B. *Brisbane*

In terms of section 70 of the *Constitution of Queensland 2001*, '[t]here must be a system of local government in Queensland'. This requirement, including taxing powers, is fleshed out in the *Local Government Act 1993* (Qld). Unlike Melbourne and Sydney, which are comprised of tens of city councils, Brisbane has a single city council. This unitary structure provided the model for the Auckland 'super city'.<sup>112</sup>

David Mercer and Benjamin Jotkowitz observe 'while local government is undoubtedly of growing importance, it can also be extremely vulnerable to radical change 'from without' if, for example, a state government wishes to reshape local authorities in such a way as to erode local democracy and make local government administrations accountable only to the higher level of government'.<sup>113</sup>

### 1. *Local taxes*

Since the structure of local government in both Australia and New Zealand follows a British-heritage model, rating is Brisbane's principal source of revenue, as it is for Auckland. Rates and utility charges constituted 44.8 percent of total revenue in the year 2015-16.<sup>114</sup> Other significant sources of revenue were: donations, contributions and subsidies (13 percent); fees and charges (11.9 percent); and TransLink Transport Authority (14.7 percent).<sup>115</sup> Unlike Auckland, the rates base for Brisbane is land value.<sup>116</sup>

### 2. *Autotopia to carbon neutrality*

Brisbane's post-war development can be seen as a story of seeking Autopia but realising 'Austerica'.<sup>117</sup> John Nightingale observes: 'The car became a virtual political slogan ... in the worker's paradise of the 1960s a worker had a right to his own home and his own car to get

<sup>112</sup> See Clare Mouat and Jago Dodson, 'Reviewing the Auckland 'super city': towards an ongoing agenda for evaluating super city governance' (2013) 50(2) *Australian Planner* 138.

<sup>113</sup> Mercer and Jotkowitz, above n 18, 163.

<sup>114</sup> Brisbane City Council, *Annual Report 2015-16* (2016) 110.

<sup>115</sup> Ibid.

<sup>116</sup> Brisbane City Council, *How rates are calculated* (2017) <<https://www.brisbane.qld.gov.au/about-council/council-information-rates/rates-payments/how-rates-are-calculated>>.

<sup>117</sup> Robin Boyd coined the term 'Austerica' which 'performed not a double, but a triple, word play: 'Austerica' was not just a hybrid American-Australianism, but a frenetic (hysterical) pursuit of what was cheapest and nastiest in American culture (the austerity version)'. See Davison, above n 37, 80.

to work. And so the trams and trolley buses had to go.’<sup>118</sup> That legacy remains. According to Nightingale:<sup>119</sup>

improvements to public transport and cycling networks are of marginal significance to the future of Brisbane as an accessible city. Despite the large amount of money being spent, it will not change Brisbane’s almost total dependence on the car. Even if the cost of car ownership and use increases enormously, because the price elasticity of demand for convenient private transport is tiny, and the income elasticity substantial, little change will occur in overall levels of demand for road space for private transport.

Today Brisbane is considered to be a liveable, world city but this has not always been so. In the Joh Bjelke-Petersen era (1968-87), government was both conservative and corrupt.<sup>120</sup> But, according to Greg Clark:<sup>121</sup>

Brisbane is an example of a city that has been able to globalise with the help of a large and financially astute city government, which has used the surplus from its recent commodities boom to erect a more international model of economic development.

The Brisbane city council has pursued a wide range of joint ventures, sponsored business conventions and sporting events, and convinced its state government to prioritise Brisbane for road and rail infrastructure funding. It has also experimented with public-private partnerships and toll roads, with some success.

These achievements indicate economic and social sustainability but Brisbane was also named ‘Australia’s Most Sustainable City in 2014 and 2016 at the Keep Australia Beautiful Australian Sustainable Cities Awards’.<sup>122</sup> Remarkably, the city council has become carbon-neutral through efforts which include greening the city’s extensive bus fleet.<sup>123</sup>

<sup>118</sup> John Nightingale, ‘Brisbane: The 200 Kilometre City or Just Another Port Town’ (2006) 24(3) *Urban Policy and Research* 409, 415. Generally, Nightingale presents a damning picture of urban planning in Brisbane and its neighbouring coastal regions.

<sup>119</sup> *Ibid*, 417-8.

<sup>120</sup> On Bjelke-Petersen’s ‘crypto-fascist, bird-brained conservatism’, see Robert Foster, ‘Tales from Pig City’ *The Monthly* (online), September 2007 <<https://www.themonthly.com.au/issue/2007/september/1188970325/robert-forster/tales-pig-city>>. On corruption, see Matthew Condon, ‘Sir Joh corrupt: late premier was to receive bribe for tower project’ *The Courier-Mail* (online), 19 September 2015 <<http://www.couriermail.com.au/news/queensland/queensland-government/sir-joh-corrupt-late-premier-was-to-receive-bribe-for-tower-project/news-story/566086d4f8aa50165cb3a4eb2c69d960>>.

<sup>121</sup> Greg Clark, ‘How cities took over the world: a history of globalisation spanning 4,000 years’ *The Guardian* (online), 1 December 2016 <<https://www.theguardian.com/cities/2016/dec/01/how-cities-took-over-the-world-a-history-of-globalisation-spanning-4000-years>>.

<sup>122</sup> Brisbane City Council, *Brisbane. Clean, Green, Sustainable 2017-2031* (2017) <<https://www.brisbane.qld.gov.au/environment-waste/be-clean-green-brisbane/brisbane-clean-green-sustainable-2017-2031>>.

<sup>123</sup> Brisbane City Council, *How Brisbane City Council went carbon neutral* (2017) <<https://www.citysmart.com.au/blog/brisbane-city-council-went-carbon-neutral/>>.

### 3. Use of taxes

The Liberal National Party of Queensland (LNP)-governed council seems willing, then, to use the city's money to promote a 'Clean, Green and WaterSmart City'<sup>124</sup> but may be ideologically opposed to directing individuals' behaviour through taxes. *Brisbane Vision 2013*,<sup>125</sup> for example, includes no mention of compaction, densification or intensification. Land value taxation is not portrayed as a tool for efficient land use. Furthermore, despite predictions for massive increases of private vehicles on the city's roads,<sup>126</sup> the council has no plans to introduce congestion charges.<sup>127</sup>

## IV. DISCUSSION

This part of the article seeks to compare Auckland and Brisbane, with a particular emphasis on population density, which, to reiterate, is commonly considered to be a proxy for sustainability. Vienna is also introduced to the discussion because the city has 'been recognised as the city with the highest number of community, business, and environment programs that have been recognised by the United Nations as good or best practice'.<sup>128</sup>

### C. Comparing Cities

Various attempts are made to compare and rank cities; some comparisons are more scientifically rigorous than others.<sup>129</sup> The widely publicised liveability rankings produced by the Economist Intelligence Unit (EIU)<sup>130</sup> and Mercer<sup>131</sup> use a range of criteria but are likely

<sup>124</sup> Brisbane City Council, *Clean, Green and WaterSmart City* <[https://www.brisbane.qld.gov.au/sites/default/files/4\\_clean\\_green\\_watersmart\\_city.pdf](https://www.brisbane.qld.gov.au/sites/default/files/4_clean_green_watersmart_city.pdf)>.

<sup>125</sup> Brisbane City Council, *Brisbane Vision 2013* (2013) <[https://www.brisbane.qld.gov.au/sites/default/files/Brisbane\\_Vision\\_2013\\_full\\_document.pdf](https://www.brisbane.qld.gov.au/sites/default/files/Brisbane_Vision_2013_full_document.pdf)>.

<sup>126</sup> See Department of Infrastructure and Regional Development, *Traffic and congestion cost trends for Australian capital cities* (Bureau of Infrastructure, Transport and Regional Economics Information Sheet 74) (2016) <[https://bitre.gov.au/publications/2015/files/is\\_074.pdf](https://bitre.gov.au/publications/2015/files/is_074.pdf)>.

<sup>127</sup> See Brisbane City Council, *Reducing congestion* (2016) <<https://www.brisbane.qld.gov.au/traffic-transport/reducing-congestion>>.

<sup>128</sup> Liam Kavanagh, *Social Sustainability & High Density Development* (2009) 28 <<https://www.planning.org.au/documents/item/11177>>.

<sup>129</sup> Compare, for example, Saskia Sassen, *Cities in a World Economy* (Sage, 4<sup>th</sup> ed, 2012) 115-26 and Monocle, *Most liveable city, 2016: Tokyo* (2016) <<https://monocle.com/film/affairs/top-25-cities-2016/>>.

<sup>130</sup> See 'The world's most liveable cities', *The Economist* (online), 18 August 2016 <<http://www.economist.com/blogs/graphicdetail/2016/08/daily-chart-14>>.

<sup>131</sup> See Mercer, *2016 Quality of Living Rankings* (2016) <<https://www.imercer.com/content/mobility/quality-of-living-city-rankings.html#list>>.

to be of particular interest to expatriate business executives or wealthy migrants.<sup>132</sup> Notwithstanding the shortcomings of such rankings, liveable cities, such as Vienna, are often also sustainable cities, particularly because they are compact and served by high quality public transport services.

Arcadis and the Centre for Economic and Business Research (CEBR) have ranked various cities, including Brisbane but not Auckland, based on social, economic and environmental factors.<sup>133</sup> Social sustainability considers 'health, education, income inequality, work-life balance, ratio of wage earners to dependents, crime, housing, and living costs'.<sup>134</sup> Economic sustainability relates to '[t]ransport infrastructure, ease of doing business, tourism, GDP per capita, the city's importance in global economic networks, Internet connectivity, and employment rates'.<sup>135</sup> Environmental sustainability concerns '[e]nergy consumption and renewable energy share, waste management, green space, sanitation, water, greenhouse gas emissions, natural catastrophe risk, and air pollution'.<sup>136</sup>

The highest rank for an Oceania city in any category of the Arcadis-CEBR survey is Wellington, which was ranked sixth for environment but 28<sup>th</sup> overall. Canberra is ranked highest overall for regional cities, at 18<sup>th</sup> place. Brisbane is ranked 30<sup>th</sup> overall, two places below Sydney and two places above Melbourne. But, whereas Brisbane ranks highly for social sustainability (21<sup>st</sup>), it is placed 41<sup>st</sup> for environment. For economic sustainability, it is ranked 30<sup>th</sup>. As Brisbane's overall position indicates, in these composite rankings, relatively poor environmental sustainability can be compensated for by high social and economic performance.

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<sup>132</sup> For a critique of such liveability measures, see Paul James, Belinda Young, Brendan Gleeson and John Wiseman, 'What actually is a good city?', *The Conversation* (online), 12 July 2017.

<sup>133</sup> See Nowakowski, above n 27, 9.

<sup>134</sup> Ibid.

<sup>135</sup> Ibid.

<sup>136</sup> Ibid.

**Table 1: Points of comparison between Auckland, Brisbane and Vienna<sup>137</sup>**

City	Urban density (people/km <sup>2</sup> )	Liveability		Sustainability
	Demographia <sup>138</sup>	Mercer 2017 rank <sup>139</sup>	EIU 2015 rank <sup>140</sup>	Arcadis (planet)
Vienna	3,900	1 <sup>st</sup>	2 <sup>nd</sup>	4 <sup>th</sup>
Auckland	2,800	3 <sup>rd</sup>	9 <sup>th</sup>	No rank
Brisbane	1000	37 <sup>th</sup>	18 <sup>th</sup>	41 <sup>st</sup>

In terms of planning and managing urban spatial development, Habitat III expects cities to adhere to certain principles, including ‘compactness’ and ‘appropriate density and connectivity’ in order ‘to prevent urban sprawl, to reduce mobility challenges and needs and service costs per capita, and to harness density and economies of scale and agglomeration’.<sup>141</sup> While being alert to the risk of reductionism, for cities in the advanced economies,<sup>142</sup> population density may be used as a proxy for environmental sustainability. A comparison between the populations of Auckland’s Statistical Urban Area and Brisbane’s Significant Urban Area indicates 1200 people/km<sup>2</sup> for Auckland and 420 people/km<sup>2</sup> for Brisbane.<sup>143</sup> The Demographia survey, which is the best-known population density comparison, indicates far greater densities for both cities. (Variations in densities usually arise from the different denominators used.) Nevertheless, it is clear that, despite pockets of

<sup>137</sup> Adapted from Kavanagh, above n 128, 18.

<sup>138</sup> Demographia, *World Urban Areas 13th Annual Edition* (2017) <<http://www.demographia.com/db-worldua.pdf>>.

<sup>139</sup> Mercer, *Quality of Living City Rankings* (2017) <<https://www.imercer.com/content/mobility/rankings/d147852/index.html>>.

<sup>140</sup> ‘Full ranking with rating and category breakdown’ *Herald Sun* (online), August 2015 <<http://media.heraldsun.com.au/files/liveability.pdf>>.

Auckland was ranked 8<sup>th</sup> in 2016 but Brisbane was not included in the survey: see ‘The world’s most liveable cities’ *The Economist* (online), 18 August 2016 <<http://www.economist.com/blogs/graphicdetail/2016/08/daily-chart-14>>.

<sup>141</sup> Habitat III, above n 19, [98].

<sup>142</sup> Kolkata was the lowest ranked city in the Arcadis-CEBR review but has a population density of 11,100 people per square kilometre, See Demographia, above n 138, 18.

<sup>143</sup> Auckland Council, *Measuring Auckland’s Population Density* (2014) 12 <<http://knowledgeauckland.org.nz/assets/publications/Measuring-Aucklands-Population-Density-26052014-Complete.pdf>>. The figures were based on the 2013 ABS census data and Stats NZ estimates.

compactness,<sup>144</sup> Brisbane is significantly less dense than Auckland, which indicates a lower degree of sustainability.

Vienna is considered to be a 'European best practice city' for its public transport which is heavily subsidised by government.<sup>145</sup> Public transport also receives significant state support in Brisbane, with the Queensland government recovering only around 24 per cent of public transit costs from fee paying users.<sup>146</sup> However, while almost three-quarters of commuters in Vienna use public transport,<sup>147</sup> Brisbane's public transport system is used by fewer than one-fifth of commuters.<sup>148</sup> Vienna's compactness is its principal distinguishing feature relative to Australasian cities. And so, while Brisbane has experienced greater densification in its central areas, 53 per cent of growth between 2001 and 2011 was in outer city areas, thereby 'signalling continuing pressures for cities to spread towards the urban fringe'.<sup>149</sup> In Vienna, the municipality builds 85 per cent of new housing, mostly eco-efficient apartment blocks,<sup>150</sup> and so can fully coordinate densification with public transport.

#### A. *Freedom to act*

According to the Climate Leadership Group of the C40 Mega Cities network:<sup>151</sup>

Responding to the climate challenge demands new technologies, policies and approaches. To deliver these cities must be able to innovate in seeking out resources, and implementing new solutions. City governments may benefit from being empowered to: *set their own tax regime and spend that revenue freely*; set up funds such as public benefit funds to issue bonds; enter into financial arrangement with private sector organisation; and procure services and solutions based on fitness for purpose as well as cost.

<sup>144</sup> Inner-city areas, notably New Farm (6,500 people per square kilometre), Kangaroo Point (6,400) and Highgate Hill (5,500) are far more intensely populated than the city overall. See Australian Bureau of Statistics, 3218.0 – *Regional Population Growth*, Australia, 2014-15  
<<http://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/3218.0Main%20Features302014-15?opendocument&tabname=Summary&prodno=3218.0&issue=2014-15&num=&view=>>.

<sup>145</sup> John Whitelegg, *Quality of Life and Public Management: Redefining Development in the Local Environment* (Routledge, 2013) 135.

<sup>146</sup> Australian Government, *Urban public transport: updated trend* (2014) 11  
<[https://bitre.gov.au/publications/2014/files/is\\_059.pdf](https://bitre.gov.au/publications/2014/files/is_059.pdf)> ('BITRE').

<sup>147</sup> Feargus O'Sullivan, *Breaking Down the Many Ways Europe's City-Dwellers Get to Work* (18 October 2017)  
<<https://www.citylab.com/transportation/2017/10/riding-bikes-buses-trains-in-european-cities/543141/>>.

<sup>148</sup> While the use of buses has increased considerably in recent years, in 2011 15.8 per cent of Brisbane's commuters used public transport, compared with 24.9 per cent of Sydney's commuters. See BITRE, \*\*\*, 3.

<sup>149</sup> Australian Government, above n 146, 2.

<sup>150</sup> See *Green Social Housing for All- Vienna (AT)* (3 December 2013) <<http://www.buildup.eu/en/practices/cases/green-social-housing-all-vienna>>.

<sup>151</sup> *Unlocking Climate Action in Mega Cities* <<http://www.c40.org/researches/unlocking-climate-action-in-megacities>> (emphasis added).

Similarly, in terms of Habitat III, countries commit themselves to:<sup>152</sup>

supporting effective, innovative, and sustainable financing frameworks and instruments, enabling strengthened municipal finance and local fiscal systems in order to create, sustain, and share the value generated by sustainable urban development in an inclusive manner.

Since administrative boundaries, such as multiple councils within a city, can be expected to hinder coherent sustainability measures, the unitary structures of Auckland and Brisbane councils should provide advantages over multi-council cities. However, a more critical consideration is that, relative to many OECD countries, devolution of functions and powers is highly restricted under the British-heritage model of local government.<sup>153</sup> As Douglas Ashford observes, typically, 'the locals have a degree of fiscal autonomy, commensurate with their responsibility and political clout'.<sup>154</sup> Both Brisbane and Auckland are constrained in their ability to take decisive action by the superior tier or tiers of government, and their limited fiscal powers. (In Austria, municipalities control 12 per cent of the country's total tax revenue.<sup>155</sup> For New Zealand, the corresponding figure is 6.9 per cent,<sup>156</sup> and, for Australia, 3.3 per cent.<sup>157</sup>) Australian and New Zealand cities are not only fettered in their ability to use taxes to promote sustainability, they also seem reluctant to use the powers they do have to direct sustainable behaviour.<sup>158</sup>

## B. National Contexts

This article is about local government but note may be taken of national contexts in which they operate. Three-quarters of New Zealand's electricity is generated from renewable sources,<sup>159</sup> although only 40 per cent of the country's overall energy consumption is

<sup>152</sup> Habitat III, above n 19, [15](c)iv].

<sup>153</sup> See generally Jan Biela, Annika Hennl and André Kaiser, *Policy Making in Multilevel Systems: Federalism, Decentralisation, and Performance in the OECD Countries* (ECPR Press, 2013).

<sup>154</sup> Douglas E Ashford, 'British Dogmatism and French Pragmatism Revisited' in Colin Crouch and David Marquand (eds), *The New Centralism: Britain Out Of Step in Europe?* (Basil Blackwell, 1989) 77, 88.

<sup>155</sup> See *Austria* (2016) <<https://www.oecd.org/regional/regional-policy/profile-Austria.pdf>>.

<sup>156</sup> See *New Zealand* (2016) <<https://www.oecd.org/regional/regional-policy/profile-New-Zealand.pdf>>.

<sup>157</sup> See *Australia* (2016) <<https://www.oecd.org/regional/regional-policy/profile-Australia.pdf>>.

<sup>158</sup> For instructive case studies of innovative fiscal measures at a local level from Asia, Europe and North America, see AECOM, *Detailed Case Studies of Selected Revenue Tools Final Report* (2012) <[http://www.metrolinx.com/en/regionalplanning/funding/Detailed\\_Case\\_Studies\\_of\\_Selected\\_Revenue\\_Tools\\_EN.pdf](http://www.metrolinx.com/en/regionalplanning/funding/Detailed_Case_Studies_of_Selected_Revenue_Tools_EN.pdf)>. To reiterate, this article does not consider all environmentally-friendly measures, just densification and transport.

<sup>159</sup> *Renewables* (2016) <<http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/statistics/renewables>>.

sustainable.<sup>160</sup> In contrast, just 14 percent of Australia's electricity is generated renewably.<sup>161</sup> Australia is one of the world's highest per capita emitters of carbon dioxide – 16.3 tonnes in 2013, compared with 7.6 tonnes for New Zealand and 7.4 tonnes for Austria.<sup>162</sup> Queensland emits the most carbon of the states and territories, with stationary energy being the main contributor, followed by transport.<sup>163</sup> This preponderance of renewable electricity provides Auckland with considerable advantages with regard to electric vehicles, private or public. In contrast, Brisbane's extensive electrified rail network is powered mostly by fossil fuels.

Environmental taxes as a share of GDP in 2014 were 2.89 per cent for Austria, 1.91 per cent for Australia, and 1.35 per cent for New Zealand.<sup>164</sup> As this last percentage indicates, New Zealand manifests a particular aversion to green taxes. The Emissions Trading Scheme (ETS) is the country's principal policy response to climate change.<sup>165</sup> However, ETS does not include methane gas produced by sheep and cattle which 'amounts to almost 1/3 of New Zealand's greenhouse gas emissions, and it is the largest contributor'.<sup>166</sup> A waste disposal levy is payable<sup>167</sup> and electric vehicles (EVs) are currently exempted from road user charges.<sup>168</sup> Otherwise, green taxes in New Zealand are distinguished by their absence. Fringe benefit tax (FBT) on employer-provided cars does not cover externalities,<sup>169</sup> whereas the value of employer-supplied bicycles or subsidised public transport is taxable.<sup>170</sup> A proposed

<sup>160</sup> *Renewable energy resources* (2016) <<https://www.eeca.govt.nz/energy-use-in-new-zealand/renewable-energy-resources/>>.

<sup>161</sup> *Australian Energy Update 2016* (2016) 3 <<https://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Documents/aes/2016-australian-energy-statistics.pdf>>.

<sup>162</sup> *CO2 emissions (metric tons per capita)* (2017) <<http://data.worldbank.org/indicator/EN.ATM.CO2E.PC>>.

<sup>163</sup> *Australian National Greenhouse Accounts: State and Territory Greenhouse Gas Inventories, 2015* (2017) 6 <<http://www.environment.gov.au/system/files/resources/15d47b77-dee2-42c6-bf2e-6d73e661f99a/files/state-inventory-2015.pdf>>.

<sup>164</sup> *Environmental taxation* (2015) <<http://www.oecd.org/env/tools-evaluation/environmentaltaxation.htm>>.

<sup>165</sup> See *About the New Zealand Emissions Trading Scheme* <<http://www.mfe.govt.nz/climate-change/reducing-greenhouse-gas-emissions/about-nz-emissions-trading-scheme>>.

<sup>166</sup> *Methane Emissions* <<http://www.landcareresearch.co.nz/science/greenhouse-gases/agricultural-greenhouse-gases/methane-emissions>>.

<sup>167</sup> See *Waste Minimisation Act 2008* (NZ) ss 41 and 86 and *Waste Minimisation (Calculation and Payment of Waste Disposal Levy) Regulations 2009* (SR 2009/144).

<sup>168</sup> See *Electric vehicles* (2017) <<http://www.transport.govt.nz/ourwork/climatechange/electric-vehicles/>>.

<sup>169</sup> See RA Scott, GV Currie and KJ Tivendale, *Company Cars and Fringe Benefit Tax – Understanding the Impacts on Strategic Transport Targets* (Research Report 474, New Zealand Transport Agency, 2012).

<sup>170</sup> Compare with Ireland, where FBT is based on carbon dioxide emissions, and bicycles and public transport subsidies are tax-free or preferentially taxed. *Taxation of benefits from employment* (2017) <[http://www.citizensinformation.ie/en/money\\_and\\_tax/tax/income\\_tax/taxation\\_of\\_benefits\\_from\\_employment.html](http://www.citizensinformation.ie/en/money_and_tax/tax/income_tax/taxation_of_benefits_from_employment.html)>.

‘carpark tax’ would have included employer-provided parking in the Auckland CBD but was abandoned.<sup>171</sup>

## V. CONCLUSION

Cities have the capacity to contribute to combatting climate change. Indeed, Habitat III expects them to play the principal role. But cities are, to an extent, hostages to or conversely beneficiaries of their national circumstances. Both Brisbane and Auckland are limited in their scope of action, including taxation, by their subordinate constitutional status. Despite its remarkable achievement of carbon neutrality, Brisbane City Council operates in the context of the highest carbon-emitting state of one of the world’s proportionately worst greenhouse gas contributors. In contrast, Auckland indirectly benefits from New Zealand’s high levels of renewable energy. Yet the country shies away from environmental taxes.

The British-heritage model of centripetal government, which denies local authorities extensive autonomy and taxing powers, obstructs Auckland and Brisbane from reaching their full sustainability potential.<sup>172</sup> But, even with the relatively narrow range of fiscal measures at their disposal, neither city council seems prepared to use taxes to direct citizens’ behaviour towards sustainable outcomes. Taxes alone cannot save the environment but as a component of a suite of green measures, they may help to direct behaviour towards achieving the goals of Brundtlandian distributive justice.

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<sup>171</sup> The Taxation (Livestock Valuation, Assets Expenditure, and Remedial Matters) Bill 64-1 (2012) included a proposal to introduce fringe benefit tax on employer-sponsored parking in the Auckland and Wellington central business districts. The Bill was withdrawn following focussed opposition in the media. For a discussion, see Jonathan Barrett and John Veal, ‘Tax Rationality, Politics, and Media Spin: A Case Study of the Failed ‘Car Park Tax’ Proposal’ (Centre for Accounting, Governance and Taxation Research School of Accounting and Commercial Law Victoria University of Wellington Working Paper No 102 May 2016).

<sup>172</sup> Mercer and Jotkowitz, above n 18, 163, observe: ‘If Australia is serious in its commitment to the principles of Agenda 21 ... we should be seeing far better resourcing and constitutional recognition of local government than is currently the case’.