OraTaiao
NZ Climate & Health Council

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## ORATAIAO LET'S GET WELLINGTON MOVING (LGWM) SUBMISSION

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### A: Introduction

OraTaiao: The New Zealand Climate and Health Council is submitting in response to the Let's Get Wellington Moving public consultation, available at http://getwellymoving.co.nz/.

OraTaiao: The New Zealand Climate and Health Council is a health professional organisation focusing on the health challenges of climate change, and the health opportunities of climate action. We call for urgent and fair climate action – which delivers real health gains now and for our future.

OraTaiao has a rapidly growing membership of health professionals: doctors, nurses, midwives, public health professionals, academics (including all New Zealand's leading international climate health experts) and health professional students. OraTaiao is a not-for-profit, politically non-partisan, incorporated society.

Our 600-strong membership is well supported by the wider New Zealand health sector (see New Zealand health professionals' Call for Action on Climate Change and Health), and by a global movement of health professional authorities. OraTaiao is a founding organisational member of the Global Climate and Health Alliance. We are therefore well-placed to support central and local government in developing healthy, equitable climate-protecting transport policy.

OraTaiao supports LGWM's guiding principles developed from 2017 public consultation. But these principles do not appear to be sufficiently defined, nor prioritised, to actually guide scenario development and evaluation.

We hope our submission encourages LGWM's 'process principles' to:

- be informed and guided by evidence
- be bold, aspirational and innovative
- adopt best practice urban design and transport standards
- seek win-wins where possible

## B: Summary

Applying the LGWM's 12 guiding principles and process principles to the 4 scenarios presented, leads to (unlisted) **Scenario A+++** as the only realistic option. This means LGWM's Scenario A with these essential additions:

**+ adding the best active and public transport measures** from the other scenarios (without increased roading)
**+ investing in hundreds of electric car share vehicles** as public good transport for affordable hourly hire
**+ starting work now on a people-dense light rail route** connecting the trains to the planes.

OraTaiao urges LGWM to:

**> Develop Scenario A+++ immediately** as the best use of our finite resources for a healthy resilient economy, community and climate.

**>** Be informed and guided by evidence, which means:
1. **Quantify and prioritise the 12 LGWM guiding principles** to credibly develop and evaluate better scenarios. The **top priority principles** are: clean and green; future-proof and resilient: accessible, healthy and safe; compact city; and (managing) growth. 'Clean and green' means Wellington's transport emissions must become net zero well before 2030 to play our part in limiting global warming to 1.5'C. This also future-proofs a resilient transport network – and maximises health and efficient land use as our population looks set to double. Targets need to be set for health outcomes and equity of access for Wellingtonians of all ages, abilities and socioeconomic situations.
2. **Analyse significant costs and benefits** – the building costs of scenarios are presented, but not running costs. Analysis must include climate and health impacts.

**>** Be bold, aspirational and innovative; adopt best practice urban design and transport standards; and seek win-wins where possible. This means:
1. Urgently invest in a **comprehensive network of safe, attractive pedestrian and cycling routes for all ages and abilities** across our city by 2020.
2. **Start work this year on light rail** (as public transport at the necessary scale and quality) along the people-dense route connecting the railway station, hospital, zoo, Kilbirnie, Miramar and airport.
3. Make **immediate changes to existing public transport** to increase reliability, use and equitable access
4. Treat **car share as public good transport** and invest in a fleet of hundreds of electric cars for hourly hire in 2018 – to reduce private car ownership by thousands.
5. Invest in a **range of travel demand measures** – ensuring that these measures reduce, not worsen, inequity. Examples include: phasing school opening and closing times around the Basin Reserve, road use pricing, and better interim public transport to the airport.

**>** Recognise that active and public transport investment (including car share) actively decongests our roads. This will avoid the need for any additional road capacity. We therefore recommend that LGWM:
1. **Place a moratorium on new roading**[1] for several years until there is light rail, car share, and networks of safe, attractive walking and cycling routes across Wellington, with climate, health, equity and affordable housing targets met.
2. **Evaluate any future roading proposals** for impacts on climate-damaging emissions, health, equity, and land displacement needed for affordable housing.

[1] With the potential exception of double lanes in Karo Drive & at-grade changes at the Basin.

## C. Defining and prioritising LGWM's guiding principles to guide scenario development and evaluation

LGWM, through its 2017 public consultation, has developed 12 guiding principles. These principles are: 1. Accessible, healthy and safe; 2. Better public transport; 3. Clean and green; 4. Compact city; 5. Demand and supply; 6. Future-proof and resilient; 7. Past, present, future; 8. Predictable travel times; 9. Set in nature; 10. Growth; 11. Travel choice; and 12. Wider view. We comment on these 12 guiding principles in four groups, in order of importance, in the following subsections.

1. Of the 12 LGWM guiding principles, 5 principles are clearly fundamental, and top priority in OraTaiao's view, as follows (in order of importance):

> *(i) Clean and Green #3* *Improve environmental outcomes for the city and the region. Through a transport system that respects nature and makes a positive contribution to environmental improvement.*
>
> Climate protection is the top environmental priority. The LGWM's consultation document reports all scenarios (A to D) as having "a minor impact on climate-damaging emissions". In that case, none of these scenarios are really worthy of public consultation – as "minor impact" implies they all fail to deliver meaningful reductions that are so important.
>
> Two years ago, as part of the Paris agreement on climate change[2], New Zealand committed to "pursue efforts to limit the (global average) temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change". We also have a special responsibility to the Pacific as citizens, family and neighbours, where warming beyond 1.5'C will render homelands uninhabitable.
>
> Limiting warming to 1.5'C requires global zero net emissions well before 2040[3]. The IPCC special report on 1.5'C later this year may update this to an even earlier global deadline. Developed countries like New Zealand have been expected to decarbonise faster than developing countries. New Zealand's transport emissions have increased the most of any sector – by 78% since 1990 up to 2015[4]. But with New Zealand's emissions profile dominated by our agriculture and tourism industries, Wellington's transport must compensate and become zero net emissions within years, not decades.
>
> As the top LGWM guiding principle, "Clean and Green" must rank all scenarios according to:
> - the total climate-damaging emissions estimated from construction and operation
> - which year each scenario will reduce Wellington's transport emissions to zero (well before 2030)
>
> *(ii) Future-proof and resilient #6* *Provide a transport system that is adaptable and future-proofed for urban growth and resilient to natural hazards and climate change. Planning for the impact that social, economic and technological change may have on travel and lifestyle preferences and recognising the role of transport services in encouraging urban development where we want it.*

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[2] United Nations Framework Convention on Climate Change. Adoption of the Paris agreement (Conference of Parties 21), 2015. https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf

[3] Walsh B, Ciais P, Janssens IA, Peñuelas J, et al. Pathways for balancing CO(2) emissions and sinks. Nat Commun. 2017;8:14856. https://www.nature.com/articles/ncomms14856. See also https://insideclimatenews.org/news/13042017/paris-climate-agreement-greenhouse-gas-emissions-global-warming

[4] Ministry for the Environment. New Zealand's Greenhouse Gas Inventory and Net Position Report 1990-2015. Wellington: Ministry for the Environment,2017. http://www.mfe.govt.nz/node/23304/

The greatest challenge we face now and well into the future is global climate change. As per the Wellington Regional Emergency Response Office's new risk approach, the top priority is risk reduction. That means mitigation (rapid reduction of climate-damaging emissions) is our first line of defence for climate adaptation and future-proofing our transport system.

Currently, the social cost of carbon is conservatively predicted to be NZ$88 per tonne by 2020 rising to NZ$176 by 2050[5], so these carbon costs must be included in cost-benefit calculations to ensure an affordable transport system that supports our local economy. The rising costs of adaptation (including infrastructure replacement and insurance) lends urgency to investing in mitigation now.

Transport design to minimise transport distances and encourage urban development in more resilient areas is important. We need to recognise that transport is physical access, but virtual access to work, study, community, recreation, goods and services is also increasingly important, especially amongst younger Wellingtonians.

New transport technology includes electric bicycles (E-bikes), electric vehicles (EVs), and potentially self-drive vehicles. E-bikes are potentially revolutionary in Wellington as they flatten our hills and conquer our wind. Add a comprehensive network of cycleways that are seen as safe for all ages and abilities, and the proportion of Wellingtonians cycling is set to accelerate.

The overall future value of EVs and self-drive cars is less certain. The Ministry of Transport estimates EVs will comprise only 40% of vehicles by 2040, the rest being fuelled by climate-damaging petrol or diesel. Although the fleet of electric vehicles for hourly hire that we propose will also encourage uptake of EVs, help grow the local second-hand EV market and lessen reliance on privately owned vehicles, neither EVs nor self-drive cars justify continued road-building. The emissions cost of new EV construction, plus highly inefficient land use for privately owned vehicles at the expense of healthy affordable housing and green space, has to be factored in. The need to rapidly reduce climate-damaging emissions is urgent and starts now. The window closes soon.

*(iii) Accessible, healthy and safe #1* *Be socially inclusive and recognise the personal safety, access and health needs of all. Through a transport system that meets the varied access needs of people of all demographics across the region, wherever they need to travel.*

Designing and evaluating transport scenarios to maximise health is essential for effective spending of limited taxes and rates – and for more efficient use of limited time for physical exercise. The latest results from New Zealand's Household Travel Survey reveal that on an average day, 81% of New Zealanders do not walk even 100 metres outside their homes[6]. Around half of New Zealand adults do not get the weekly physical exercise needed for good health, with similar proportions of younger people[7].

[5] Mid-range social costs of carbon in 2017 dollars. Source: Chapman R, Preval N, Howden-Chapman P. How economic analysis can contribute to understanding the links between housing and health. Int J Environ Res Public Health. 2017;14(9).pii:E996. http://www.mdpi.com/1660-4601/14/9/996/htm 2. Methods.

[6] Ministry of Transport. New Zealand Household Travel Survey 2015-2017. Wellington: MoT, 2017. http://www.transport.govt.nz/assets/Uploads/Research/Documents/Household-Travel-Survey-intro-Dec2017.pdf

[7] New Zealand College of Public Health Medicine. NZCPHM Policy Statement on Physical Activity. Wellington: NZCPHM, 2014. https://www.nzcphm.org.nz/media/81766/2014_11_28_physical_activity_and_health_policy_statement.pdf

The 2013 joint regional council report estimated the economic loss from physical inactivity as 1% of GDP[8]. A landmark 2011 analysis by OraTaiao members calculated that switching just 5% of Auckland's urban vehicular miles to cycling would save 116 lives nationally through improved physical activity[9], which is one-third of New Zealand's road crash death toll.

By choosing transport scenarios B, C or D that increase Wellingtonians' dependence on sedentary private vehicle-based transport, even more lives will be lost prematurely; health, wellbeing and productivity will be unnecessarily limited; and health sector spending wasted on preventable ill-health.

Likewise, transport scenarios must include people with poor physical mobility and other disabilities, with public transport and walkways that are accessible and work well for all Wellingtonians, including those of us using guide dogs, pushchairs, walking sticks, wheelchairs, or mobility scooters. Road space and more convenient parking should be prioritised for emergency vehicles, invalids and people with disabilities and their caregivers, people with babies and toddlers, and/or during the later stage of pregnancy, and senior citizens.

OraTaiao recommends that bold targets be set for active and public transport use – which include Wellingtonians of all ages and abilities. How about eighty percent of Wellingtonians (spread across all ages, genders & abilities) are able to achieve their weekly healthy physical activity through more active transport choices by 2020? And by 2025, both hospital admissions and days absent from employment related to physical inactivity have dropped to one tenth? We note that public transport and car share use can also increase physical activity & health.

Both Tiriti o Waitangi obligations and opportunities for greater social inclusion need to be considered. For example, the health impacts for increased cycling uptake amongst Maori has been shown to be double that of non-Maori, because of the differing disease profiles[10]. We therefore recommend that LGWM prioritises safe, healthy active transport and public transport in areas with high Māori and Pacific populations, designed in partnership with Māori and Pacific communities, as this will maximise benefits for health and equity.

OraTaiao also recommends that LGWM survey, using focus group and structured individual interviews, to identify both barriers and incentives for greater active transport, public transport and car share uptake. Interviews should cover a diverse range of Wellingtonians with diverse ranges of socioeconomic situations, culture, locations, household structure, age, stage, gender, responsibilities/activities, and physical abilities/disabilities.

*(iv) Growth #10 Encourage continued economic growth and support population growth and intensification of Wellington city as the economic engine of the region. Through a transport system that provides opportunities for residents and businesses to support the desired growth. Plus Compact city #4 Reclaim urban space to support a compact and liveable city. Through a transport system that minimises traffic in the CBD and ensures ease of access to facilities, entertainment and jobs.*

[8] Auckland Council, Waikato Regional Council, Wellington Regional Strategy Committee. The costs of physical inactivity: towards a regional full-cost accounting perspective. Market Economics Limited. 2013. http://www.gw.govt.nz/assets/About-GW-the-region/News-and-media-releases/Physicalinactivity-costs-report.pdf

[9] Lindsay G, Macmillan A, Woodward A. Moving urban trips from cars to bicycles: impact on health and emissions. Aust N Z J Public Health. 2011;35(1):54-60. http://onlinelibrary.wiley.com/doi/10.1111/j.1753-6405.2010.00621.x/pdf

[10] Lindsay et al. 2011, *op cit*.

Good health and wellbeing is also socially determined[11,12] by access to the basics of warm safe housing, nourishing food, and belonging, participation and meaningful activity in our city. As Wellington's population is projected to as much as double within three decades[13], keeping our city compact becomes even more important for affordable access to work, study, community, recreation, goods and services.

Wellington is already facing a housing crisis with the stability of home ownership moving out of the reach of many Wellingtonians. Rising rents are eroding personal income available for the health basics of food, energy, communication, participation, advancement, health services, retirement support, and transport – and forcing the most vulnerable to sleep in garages, cars, and out on our streets and parks.

To keep Wellington compact and accessible, with affordable housing in the face of rapidly rising population, our transport system must maximise efficiency. For our health's sake, we can't afford to waste land better used to affordably house people. Wellington's transport system must be as efficient as possible.

A bicycle takes up a fraction of the space of a car, a pedestrian even less space. One bus can replace 50 single occupant cars, and in turn, just one light rail vehicle has the capacity of 7 buses with faster more accessible boarding and a fixed predictable track for increased pedestrian/cyclist safety. One car share vehicle can replace more than ten privately owned cars – and reduce household transport costs to hundreds, not thousands of dollars, which also helps reduce transport poverty. This can have a significant impact, particularly for low-income households.

Wellington clearly has too many privately-owned cars already, as both streets and footpaths are clogged with parked cars. Thousands more privately-owned vehicles are predicted as northern motorway projects are completed. The wider Wellington region's rapidly growing population, with new motorways, is also likely to add even more cars to the city.

2. The following 3 further guiding principles (of LGWM's 12) appear to describe **how** to encourage Wellington's clean and green, healthy, resilient, future-proofed transport system – and are consistent with the 5 fundamental priority principles (above).

These enabling guiding principles are:

*(i) Travel choice #11* *Better transport choices for the region, in alignment with the sustainable transport hierarchy in the Wellington Urban Growth Plan and the Regional Land Transport Plan.*
The sustainable transport hierarchy[14] prioritises pedestrians, then cyclists, followed by public transport then moving freight, with private vehicles last.

*(ii) Better public transport #2* *Significantly enhance public transport and increase its use. Through improvements in the level of service across all public transport, to make it easier to get around the region.*

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[11] New Zealand College of Public Health Medicine. NZCPHM Policy Statement on Health Equity (adopting the New Zealand Medical Association Position Statement on Health Equity 2011). Wellington: NZCPHM, 2016. https://www.nzcphm.org.nz/media/58923/2016_11_17_nzcphm_health_equity_policy_statement.pdf

[12] Marmot M, Friel S, Bell R, Houweling TA, Taylor S. Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. Lancet. 2008; 372(9650):1661-9. http://www.sciencedirect.com/science/article/pii/S0140673608616906

[13] WCC CEO Ken Lavery, quoted 2016 at https://www.stuff.co.nz/national/82678797/The-big-squeeze-Wellingtons-population-could-almost-double-in-next-30-years

[14] From page 46 of Wellington Urban Growth Plan 2014-2043

*(iii) Demand and supply #5* *Recognise that we need to do more than just build infrastructure and consider a range of ways to manage travel demand and supply across the network. Through a transport system that has a range of costs and incentives in place to encourage change in network use.*
This includes phasing school opening and closing times around the Basin Reserve, road use pricing, and better interim public transport to the airport.

3. LGWM's guiding principle *Predictable travel times #8* *Significantly reduce the impact of congestion on journey time predictability for all, at all times. All includes commuters, tourists, movers of freight, tradespeople and anyone travelling to or from the hospital or airport at any time* needs to be applied with care, as this may conflict with guiding principle *Demand and Supply #5*'s use of travel demand measures to incentivise active and public transport modes ahead of private vehicle use.

The principle of significantly reducing the impact of congestion on journey time predictability for all, at all times, can be achieved most times. But not where this generates more single occupant car use which is likely to lead back to more car congestion, climate-damaging emissions, health costs, inefficient land use – and less predictable travel times for all.

4. The remaining 3 LGWM guiding principles requested by Wellingtonians, are easily achieved within a clean and green, healthy, resilient, future-proofed transport system:

*Past, present, future #7* *Respect the importance of character and heritage in New Zealand's capital city. Through a transport system that ensures infrastructure developments are integrated with their built environment.*
*Set in nature #9* *Ensure that Wellington city remains safe and attractive, set in nature and connected to the harbour.*
*Wider view #12* *Recognise that there is a wide range of benefits to be realised from integrating urban form and transport thinking, and that increased value should not be measured by cost alone.*

## D. Scenario A+++ is the only possible conclusion from applying the guiding principles above.

The four scenarios presented by LGWM do not appear to be guided by the 12 principles derived from earlier consultation, nor the process principles. Starting with Scenario A with modest active and public transport improvements, then coupling increasing active and public transport improvements, with increased roading to also encourage more private vehicle use in Scenarios B, C and D wastes finite ratepayer and taxpayer funds.

This design of Scenarios B, C and D completely ignores the ability of improved active and public transport to decongest roads without any roading construction required. Growing active and public transport is, in the words of LGWM's process principle, "a win-win".

Wellington cannot afford to waste public money on badly designed transport – especially when facing the urgency of climate protection and adaptation, affordable housing, reducing poverty and inequity, better health and healthcare access, and playing our part as a global citizen.

OraTaiao notes that the new Minister for Transport has said he wants health, safety and environmental improvements from transport; the environmental impact of transport reduced; support for active modes of walking and cycling increased; and to increase the role of rail to enable efficient passenger movement.

Applying the LGWM's 12 guiding principles and process principles to the 4 scenarios presented, leads to (unlisted) **Scenario A+++** as the only realistic option. This means LGWM's Scenario A with these essential additions:

**+ adding the best active and public transport measures** from the other scenarios (without increased roading)

**+ investing in hundreds of electric car share vehicles** as public good transport for affordable hourly hire
**+ starting work now on light rail along a high-population route** that connects the trains to the planes.

OraTaiao therefore urges LGWM to:

**> Develop Scenario A+++ immediately** as the best use of our finite resources for a healthy, resilient economy, community and climate.

**>** Be informed and guided by evidence, which means:

1. **Quantify and prioritise the 12 LGWM guiding principles** to credibly develop and evaluate better scenarios, so that Wellington's transport emissions become net zero well before 2030 to play our part in limiting global warming to 1.5'C. This also future-proofs a resilient transport network – and maximises health and efficient land use as our population looks set to double. Targets need to be set for health outcomes and equity of access for Wellingtonians of all ages, abilities and socioeconomic situations.

2. **Analyse significant costs and benefits** – the building costs of scenarios are presented, but not running costs. Analysis must include climate and health impacts.[15]

**>** Be bold, aspirational and innovative; adopt best practice urban design and transport standards; and seek win-wins where possible. This means:

1. Urgently invest in a **comprehensive network of safe, attractive pedestrian and cycling routes for all ages and abilities** across our city by 2020.

2. **Start work this year on light rail** (as public transport at the necessary scale and quality) along a high-population route that connects the railway station, hospital, zoo, Kilbirnie, Miramar and airport in just 20 minutes.

3. Make **immediate changes to existing public transport** to increase reliability, use and equitable access

4. Treat **car share as public good transport** and invest in a fleet of hundreds of electric cars for hourly hire in 2018 – to reduce private car ownership by thousands.

5. Invest in a **range of travel demand measures** – ensuring that these measures reduce, not worsen, inequity. Examples include: phasing school opening and closing times around the Basin Reserve, road use pricing, and better interim public transport to the airport.

**>** Recognise that active and public transport investment (including car share) actively decongests our roads. This will avoid the need for any additional road capacity. We therefore recommend that LGWM:

[15] The social cost of carbon is currently projected to be NZ$88 in 2020, rising to NZ$200 by 2050. New Zealand experiences high health costs from physical inactivity built into our transport system.

1. **Place a moratorium on new roading**[16] for several years until there is light rail, car share, and networks of safe, attractive walking and cycling routes across Wellington, with climate, health, equity and affordable housing targets met.

2. **Evaluate any future roading proposals** for impacts on climate-damaging emissions, health, equity, and land displacement needed for affordable housing.

Thank you for this opportunity for OraTaiao to make our written submission to Let's Get Wellington Moving.

Yours sincerely

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[16] With the potential exception of double lanes in Karo Drive & at-grade changes at the Basin.