

18 January 2018

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Let's Get Welly Moving  
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**Re: Let's Get Welly Moving: December 2017 public consultation**

This submission is from the Architectural Centre, an incorporated society dating from 1946, which represents both professionals and non-professionals interested in the promotion of good design. We make the following points regarding the Let's Get Welly Moving scenarios:

**GENERAL**

1. There is a need to be much more ambitious. We consider that the scale of changes needed will depend largely on political will. Saying this is not in any way to suggest this is an easy project - but the election of a pro-sustainability government, supported by the Green Party and led by a woman who has proclaimed climate change to be the "*nuclear-free moment*" of her generation, must mean that the current political context is as good as it can be in order to make a truly transformative difference to Wellington's transportation. In addition, the Wellington Mayor has this year projected an image of Wellington's future in which: "*You will be able to get the light rail from the eastern suburbs ... [and] Hataitai into the city ... people will be able to take a tunnel from Mount Victoria all the way through to the other side of the Terrace without driving through the city.*"<sup>1</sup>
2. This means that legislative change (e.g. to support congestion charging,<sup>2</sup> change the current land transport funding allocations privileging SH1 traffic etc.) must not be presented as "out of scope," and should be lobbied for by LGWM in order to get the best outcomes for Wellington.
3. There MUST be carbon emissions reduction at least equivalent to transport's share of the 30% reduction in emissions (2005 levels) by 2030, as per the Paris Agreement, in order for the LGWM proposals to be viable. We recommend that these (minimum) targets be reformulated as monthly targets in order to make them more immediate and realisable. We consider that current lack of any of the LGWM proposal to materially, positively mitigate climate change as hugely disappointing and socially irresponsible.
4. We strongly support initiating planning and implementation of LRT now.

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<sup>1</sup> "Dreaming of kakapo in the backyard" *Independent Herald* (10 January 2018) p. 4.

<sup>2</sup> c.f. "The state highway would have to be excluded from any congestion charge as per the LTMA 2003" "Travel Demand Management Study: Stage 1 report" (10 March 2017) p. 21



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5. We strongly support prioritising sustainable and active transport, over car traffic, in accordance with the WCC sustainable transport hierarchy.<sup>3</sup>
6. The focus of the LGWM proposals is on physical responses. We believe that Traffic Demand Management (TDM) will be an important aspect of any success of future transport solutions and it needs to be understood and factored in. In support of this, and the related need for behavioural change to effect a more sustainable transport system, we consider that there is a need for behavioural psychologist expertise to be added to this work. What will be needed is a culture change, which is an enormously difficult multi-disciplinary "problem."
7. The attractiveness of the private car must be reduced relative to sustainable and active modes. There is a need for pro-active reduction of private vehicle traffic (e.g. through congestion charging, reduction of parking, and better PT provision). This is not a simple task, and is more complex than congestion and economics. We suspect this will require expertise in behavioural change (e.g. psychology, advertisers) to be successful.
8. We strongly support the stated LGWM aim that "*we ... need to move more people without more vehicles.*"<sup>4</sup>



Figures 1 and 2: bike stairway, China; bike gutters, Portland

## SCENARIO A

9. We support Scenario A. Specifically we support:
  - (a) improving sustainable and active transport.
  - (b) reducing or eliminating the severance between the harbour and the CBD.
  - (c) reduced traffic through the CBD (including continued use of delivery vehicles and taxis).
  - (d) a reduced speed limit
  - (e) a dedicated PT spine.

<sup>3</sup> WCC Wellington Urban Growth Plan 2014-2043 (June 2015) p. 46

<sup>4</sup> LGWM "Strategic Response" (November 2017) p. i.



Figure 3: dropped kerb cycling infrastructure, Adelaide Rd

10. In addition, we suggest:

- (i) that the project team develop a more sophisticated understanding of the opportunities for cyclists through the CBD. Currently the lack of east-west permeability (e.g. from Kent Tce westward) is an impediment to cycling (and other transport modes) through the CBD forcing cyclists down Kent/Cambridge Tce and along the waterfront to access CBD locations;
- (ii) widening footpaths where reduced traffic allows; reversing some one-way streets (e.g. Jessie St);
- (iii) free left turns for cyclists
- (iv) extending Garrett St (under Katipo House) to Victoria St;
- (v) extending Barker St through to Tory St
- (vi) creating cycling routes (including easements) which exploit the ability for bikes to travel on road and on shared footpaths;
- (vii) encourage more dropped curbs and "bike gutters,"<sup>5</sup> to enable flexibility for cyclists to maximise road/footpath opportunities (see Figures 1-4);
- (viii) review the current information bias privileging car-drivers (e.g. parking availability, travel time estimates) which further contributes to the appeal and convenience of car driving
- (ix) banning single occupancy private cars in the CBD;
- (x) progressively reducing the number of carparks (including car-parking buildings);
- (xi) remove carparks from arterial routes to provide space for cycle lanes and/or bus lanes
- (xii) promoting electric car share schemes
- (xiii) locating a couple of key locations for electric car share parking at the periphery of the CBD;
- (xiv) while it is good to see increased bike parking replacing car parks (e.g. Figure 5), research is needed to understand if this has had any (positive or negative) impact on retailing. This has been the case in cities in America and can be used in gaining support for the removal of car parks.
- (xv) making parking buildings in the CBD a prohibited activity in the District Plan

<sup>5</sup> e.g. "bicycle gutters on stairways ... Increasing the convenience and attractiveness of cycling by providing shortcut routes not available to cars" "Travel Demand Management Study 2017: Stage 1 report" (10 March 2017) p. 23



Figures 4 and 5: Dropped lip in driveway, Willis St (nr intersection with Karo Drive); replacing car parks with bike parks, Wigan St

## SCENARIOS B-D

### Light Rail Transit

11. In addition to proposals in Scenario A, we see the other priority to be the establishment of LRT.
  
12. We support commencing building a LRT system immediately. The stated need in 10 years' time<sup>6</sup> (the same period of time estimated needed to build supporting infrastructure etc.<sup>7</sup>) suggests that not doing this would be silly. We note that the "BRT Investigation Report" states that "*it might be better to install LRT in the first place,*" and "*[i]f LRT will definitely be implemented in the future, then it is more cost efficient to build it now.*"<sup>8</sup> In addition the WSP "Wellington Mass Transit Independent Review" notes that: "*[b]ifurcation of the route at [the] Basin Reserve is not ideal,*" "*[t]he cost difference between BRT and LRT is smaller than suggested by the PTSS,*" and "*there has been little work undertaken yet on the potential land development and property benefits that might be promoted by LRT, nor on the amenity and city enhancing attributes that LRT systems are known to bring.*"<sup>9</sup> This report also states that LRT has "*greater capacity per vehicle and greater ride comfort compared to BRT. LRT is often viewed as more sophisticated and of higher quality than bus based systems and potentially attracts more customers, especially those transferring from using private cars.*"<sup>10</sup>
  
13. With respect to the "*potential land development and property benefits that might be promoted by LRT,*" the WSP report states that "*these benefits can be significant and can contribute towards a compelling investment case.*"<sup>11</sup> We also note the potential development benefits for the north section of Adelaide Rd which has long been desired by WCC to become redeveloped as higher density residential, and suggest that LRT could well be the mechanism which makes the development of this area feasible from a property developer's perspective.<sup>12</sup>

<sup>6</sup> LGWM "Public Engagement Document" p. 8.

<sup>7</sup> LGWM public launch, Wednesday 15 November 2017.

<sup>8</sup> "BRT Investigation Report" pp. 15, 26.

<sup>9</sup> WSP "Wellington Mass Transit Independent Review" (October 2017) pp. iii-iv.

<sup>10</sup> WSP "Wellington Mass Transit Independent Review" (October 2017) p. 12.

<sup>11</sup> WSP "Wellington Mass Transit Independent Review" (October 2017) p. iv.

<sup>12</sup> We note this in particular given the statement in the WSP report that "*there is limited evidence yet to suggest that these factors [land use intensification and higher property values in surrounding areas] will be significant in the Wellington context beyond the CBD.*" WSP "Wellington Mass Transit Independent Review" (October 2017) p. 43 (emphasis added).



Figure 6: possible LRT route including stops with tourism potential

14. A possible LRT route might be: Stadium→Railway→P.O. Square/Queen's Wharf→Civic Square/Whare Waka→Basin/Hauwai→Hospital/Ngā Puna Waira→Newtown→Zoo→Kilbirnie→Airport (see Figure 6). We are assuming that LRT will be higher speed and have fewer stops than buses, and that bus and LRT systems will be designed to complement each other.
15. Enabling LRT along the Quays has a number of advantages, including:
  - (a) construction disruption for PT (buses) is minimised
  - (b) construction disruption can be used to encourage mode shift from cars to PT as most of the traffic on the Quays are cars and commercial vehicles.<sup>13</sup>

<sup>13</sup> LGWM "Case for Change (November 2017) p. 10.

- (c) the LRT route can be of a different nature to the bus route (e.g. faster, fewer stops, more attractive to tourists (e.g. closer to tourist spots, hotels,<sup>14</sup> view of the harbour)
- (d) the complementary nature of LRT to buses on a separate route will mean less bus-on-bus (or PT-on-PT) congestion along the Golden Mile
- (e) "thickens" the PT corridor/"spine," providing additional PT choice, and resilience.
- (f) there are high pedestrian volumes in this area (e.g. Featherston and Whitmore in AM and PM peaks,<sup>15</sup> the waterfront<sup>16</sup>)
- (g) this route would support WCC priorities to improve: "*pedestrian and cycle connections between the city and the waterfront .... This supports the Council's objective of making the waterfront the premier recreation area for the city, particularly for children,*"<sup>17</sup> and
- (h) this would facilitate development which would improve the current poor pedestrian environment ("*The quays ... which carry up to six lanes of fast-moving vehicular traffic, have variable footpaths[sic] widths .. discontinuous weather protection, some blank building facades which do not provide visual interest or retail activity at street level, long waiting times for pedestrians at signalised crossings, and generally poor streetscape.*"<sup>18</sup>)



Figure 7: Istanbul tram

- 16. We also note that twin PT routes through the CBD was assumed in the analysis supporting the WSP report, which stated that "*to avoid excessive numbers of vehicles using the PT Spine a secondary spine was assumed to carry a proportion of the conventional bus services.*"<sup>19</sup>
- 17. With respect to LRT along the waterfront, our experience is that - because mass transit is more efficient, and so fewer vehicles on the road (c.f. car traffic) - that the severence issues experienced are significantly less with PT.

<sup>14</sup> Hotels on or near the route include: Hotel Waterloo (1 Bunny St), Rydes (75 Featherston St), Ibis (153 Featherston St), Inter Continental Hotel (2 Grey Street), West Plaza Hotel (110-114 Wakefield St), Nomads Capital Hostel (118-120 Wakefield St), Amora Hotel (170 Wakefield St), At Home (181 Wakefield St), YHA Wellington (292 Wakefield St), QT Museum (90 Cable St), and Ohtel (66 Oriental Parade)

<sup>15</sup> LGWM "Case for Change (November 2017) p. 8.

<sup>16</sup> LGWM "Case for Change (November 2017) p. 16.

<sup>17</sup> "Baseline Report: Land Use and Urban Form 2017" (14 June 2017) p. 36.

<sup>18</sup> "Baseline Report: Land Use and Urban Form 2017" (14 June 2017) p. 44.

<sup>19</sup> WSP "Wellington Mass Transit Independent Review" (October 2017) p. 23.

18. There appears to be an assumption that routes will rely on spatial (or grade) separation (e.g. at the Basin). Temporal separation (e.g. as managed by traffic lights) can provide priority to PT and also reduce negative impacts on the built environment.



Figure 8: cars on light rail tracks, Istanbul

### SH1 and the Basin

19. We support moving SH1 from Vivian St to Karo Dr and extending the Arras Tunnel so Sussex St goes over SH1 (Scenario C) in order to improve the environment of Vivian Street. We consider that this shift could be achieved prior to the westward bypass of the Basin roundabout (see Figure 9).

20. We acknowledge that there are numerous possible routes for LRT and consider that establishing LRT as *the* prime importance.

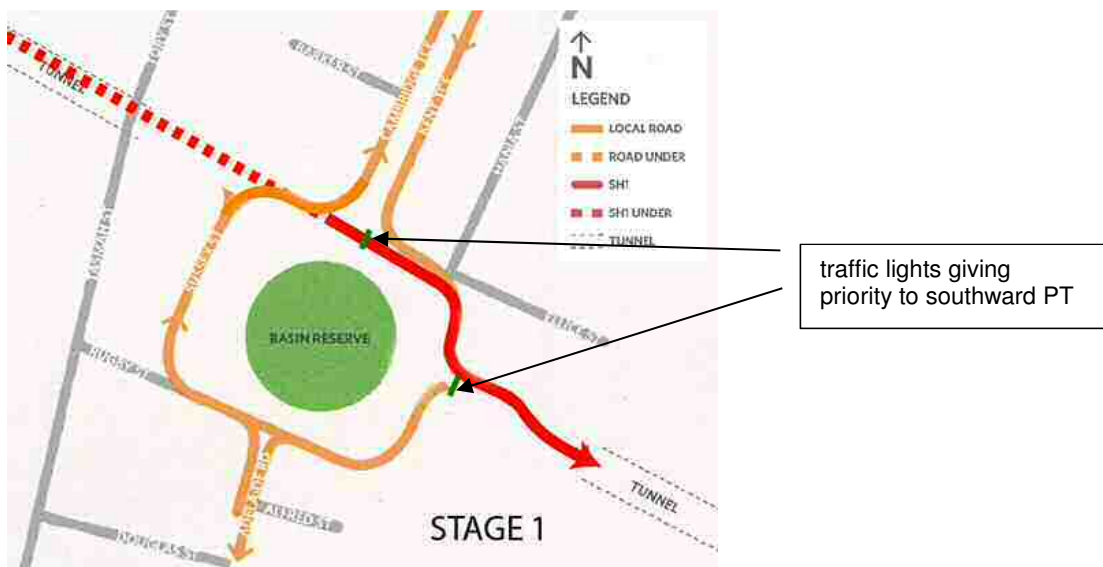


Figure 9: possible Stage I of Basin roading, westward route as present.

21. We note the sentence: "To move to mass transit in future we need to make changes to our road network at the Basin Reserve and through Mt Victoria

so mass transit vehicles don't get held up by other traffic,"<sup>20</sup> and suggest that this thinking needs to be inverted. Mass transit should be given priority which means that it won't get held up at the Basin. Other traffic must be subservient to this.



Figure 10: possible Stage II of Basin roading. Traffic lights give priority to southward LRT.

22. We support "at grade" (time rather than space) separation at the Basin for southbound LRT on the local road, with traffic lights (marked with the green lines) which prioritise mass transit (LRT) (see Figures 9 and 10), because of the lesser impact on the environment. The topography effects grade separation for the northbound local road.
23. However, we suggest undergrounding Karo Drive (two directions) from west of Taranaki Street traffic lights to the east of Sussex Street, effectively shifting the disruption of Taranaki Street traffic lights to the Basin, and then use time rather than space to separate E/W traffic from southward mass transit. We envisage that removing the Taranaki Street intersection from SH1, shifting the eastbound section of SH1 to Buckle Street, and realigning westbound SH1 at the Basin will provide sufficient traffic benefits to ameliorate any effect of PT priority at the Basin traffic lights.
24. We also suggest reducing the number of on-/off-ramps linked to SH1 to prioritise regional over local traffic use of SH1. We note that if a (more expensive) tunnel was built from Mt Victoria to the Terrace Tunnel (as the Mayor supports), on- and off-ramps would likely be rationalised and reduced with benefits to regional traffic on SH1. Similar thinking could be adopted at ground level.
25. We also recommend removing the Basin fence and reducing some vegetation to enable better sightlines (and safety) for pedestrians in the Basin vicinity. Temporary event fencing could be hired for the occasional ticketed cricket game etc.

### Tunnel duplication & Ruahine St

26. We query the need for tunnel duplication in Mt Victoria and The Terrace - especially as suggested. This position reflects LGWM's stated aim "to

<sup>20</sup> LGWM "Public Engagement Document" p. 8.



*move more people without more vehicles,"*<sup>21</sup> but we acknowledge that a need (or not) for a second Mt Victoria tunnel is contingent on the LRT route, though the allocation of road space for private vehicles should remain the same as present.

27. We also note that the current Mt Victoria Tunnel is extremely efficient, and given the commitment to no rise in vehicle numbers, and the role of the Mt Victoria tunnel in regulating and suppressing vehicle numbers, a second tunnel may only increase vehicle numbers and ultimately congestion, unless road space allocation remains constrained.
28. We do not support any widening of Ruahine St, except to create a median strip and cycle lanes.

## ROAD SECTIONS

29. Many of the proposed sections are concerning because cyclists are excluded from most of the roadways. We consider that this is an unnecessary omission for all of the light rail sections because locating stop shelters in the median strip enables more efficient use of space (see Figure 11 below). We suspect that this would enable cycling to be incorporated into the 15-20m road section, which currently only includes pedestrian and light rail (in Appendix B: Route Plans).

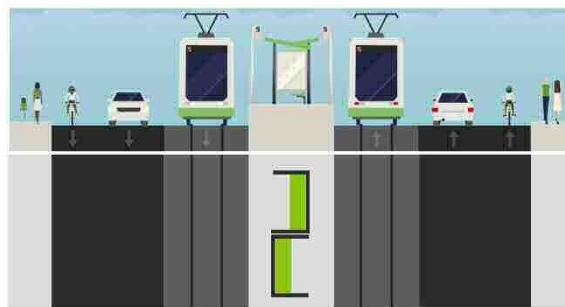


Figure 11: Possible road section (above) and plan (below) of LRT stop

30. We also note that all of the road sections for Cambridge Terrace assume that Vivian Street will continue to serve the southward route for SH1, and an asymmetrical carriage way. Kent and Cambridge Terraces are a strong remnant of the Victorian (1840s) plan of Wellington, and the symmetrical arrangement of the Canal Reserve is an important part of the heritage of this streetscape (referred to in Appendix C explanation of assessment (second row)). Given the removal of SH1 from Vivian Street has significant benefits for the walkability and liveability of that part of the CBD, we discourage the assumption that long term SH1 will be a two-way Vivian St/Karo Dr pair (e.g. Kent and Cambridge Tce road sections for routes N1, N2A, N2B, N3A and N3B in Appendix B: Route Plans N1, N2A, N2B, N3A, N3B).

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<sup>21</sup> LGWM "Strategic Response" (November 2017) p. i.



Figure 12: "WCC Sea Level Rise Mitigation Options CBD - No mitigation"<sup>22</sup>

## ANALYSIS

31. It appears that much of the data is presented without analysis specifically related to the outcomes described by the project aims/guiding principles. Questions of why observed characteristics and phenomena occur need to be engaged with, as does a quantification of the qualities and characteristics that the project is aiming for and how these might be achieved. Again we consider this is likely to involve a wider disciplinary range of research skills than appear to be currently used.

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<sup>22</sup> WCC "Sea Level Rise Options Analysis (June 2013) p. 97.  
<https://wellington.govt.nz/~media/services/environment-and-waste/environment/files/61579-wcc-sea-level-rise-options.pdf>

32. For example, regarding Transport Demand Management (TDM), there is no analysis regarding "who" is using specific modes, or "why" Wellingtonians are using the modes they do (e.g. why do "*Fewer people use public transport to get around at weekends*"<sup>23</sup>?). This is despite the statement in the "Travel Demand Management Study" that "[d]etermining who is travelling and why they are travelling will lead to discovering the best TDM measures to use in a situation."<sup>24</sup>
33. There are several issues or areas that appear to us to be highly relevant considerations which appear to be missing in the data collection and/or analysis, including:
- (a) an evaluation of climate change (including: sea level rise (Figure 12) or impact on carbon emissions)
  - (b) modal analysis of motorbikes, e-bikes, taxis, ferries
  - (c) analysis of PT wait times
  - (d) ramifications and opportunities for an ageing population (e.g. bus stop design, design for dementia, universal design principles), and for tourism
  - (e) data on access/mode use related to the hospital
  - (f) analysis of school drop-offs; weekend school sport; multi-destination trips
  - (g) congestion tolerance, potential to spread peaks (e.g. role of employers and glide time)
  - (h) strategies for reducing car ownership, impact of car sharing
  - (i) potential impact of technology (e.g. driverless car smart intersections,<sup>25</sup> vehicle-to-infrastructure communications and vehicle-to-vehicle communications, the impact of 3D-printing on freight needs, email, Skype, remote work)
  - (j) the decline in the weekly shop, with people increasingly "*often stopping to shop for it on the way home from work*,"<sup>26</sup> meaning smaller quantities of goods to carry, lessening the need of a car for shopping.
34. The documents often appear to be "traffic-centric," with significantly more pages dedicated to discussion traffic issues, than sustainable transport. An example is the "Estimates of costs of road congestion in Wellington." This document is also concerning for a number of reasons:
- (a) It assumes that congestion is a negative phenomenon, even though it is clear that congestion (e.g. Mt Victoria Tunnel) has successfully suppressed growth in traffic which is a positive outcome.
  - (b) The identification of traffic congestion as a problem to be solved appears to contradict research on congestion tolerance and the observation that cities with high levels of PT use and walking often have high traffic congestion.<sup>27</sup>
  - (c) It focuses on reducing travel times as a mechanism to reduce greenhouse gas emissions, rather than addressing the more significant causes of emissions from the operating costs and embodied energy of cars.

<sup>23</sup> LGWM "Case for Change (November 2017) p. 7.

<sup>24</sup> "Travel Demand Management Study Stage 1 report" (10 March 2017) p. i.

<sup>25</sup> an example is MIT research for driverless vehicle intersections. Brake, Alan "MIT researchers plan "death of the traffic light" with smart intersections" *Dezeen* (21 March 2016) <https://www.dezeen.com/2016/03/21/light-traffic-junctions-mit-research-smart-intersections-design-driverless-vehicles/>

<sup>26</sup> Smithers, Rebecca "Why Britain is ditching the weekly shop" *The Guardian* <https://www.theguardian.com/business/2017/nov/01/weekly-shop-daily-spending-waitrose-supermarket>

<sup>27</sup> Taylor writes that "walking and transit use are higher in densely developed cities because of congestion" Taylor, Brian "The politics of congestions mitigation" *Transport Policy* (2004) 11(3) p. 300.

- (d) There are class and mode prejudices apparent, including the claim that the rescheduling of freight to non-peak times has no cost because it "*is purely the extra hours they [transport companies] have to pay drivers,*" with no concern of the costs of shiftworking (social, family and impacts on sleep etc), and an assumption that car drivers don't chose to battle with congestion, over using other transport modes.
35. it might be useful to map CBD carparking and compare this with data in the "Data Report" Figures 51-62.<sup>28</sup> Using similar figures to represent the CBD mode share that the project is aiming to achieve would also be useful to contextualise this information.
36. a comparison of "Data Report" Figures 78-81<sup>29</sup> with NZTA evidence presented at the Basin Board of Inquiry might usefully inform the impact of the Arras Tunnel on congestion levels and whether or not traffic model predictions were accurate regarding the impact of the tunnel.
37. the analysis re: PT and the airport omits information regarding route 11, which is also used to access the airport.<sup>30</sup> (The Airport Flyer is expensive and has limited bus stops (i.e. it does not stop at all bus stops on the route), and the route misses many suburbs).
38. There appear to be a number of errors in the "Data Report" (e.g. Figure 47, the "4" motor vehicle occupants probably should be 19,250<sup>31</sup>; Figure 60: the 120% should be 100% (or 101% due to rounding), 16,000 should be 19,200 and percentages: 60% (motor vehicles), 7% (PT), 33% (pedestrians), 1% (cyclists)<sup>32</sup>; Figure 76 seems to be missing Adelaide Rd data which appears in Figures 78 and 80<sup>33</sup>; it is not clear why Figures 76 and 80 re: traffic entering Mt Victoria tunnel are different.<sup>34</sup> These aren't critical if they are at the level of typos and haven't fed into any analysis.

## OTHER

39. PT needs to be cheaper for couples and families than the private car.
40. The data regarding commuter journeys to the suburbs for work<sup>35</sup> indicate a significant reliance on cars. This suggests to us that possibly many people (29,000 journeys) working in the suburbs do not live close to their workplace, and that the active and public transport networks between suburbs are insufficient and/or ineffective, perhaps because the PT focus is primarily into and out of the CBD. The 29,000 journeys affected<sup>36</sup> are 18% of the 162,000 peak commuting journeys,<sup>37</sup> more than twice the 13,000 journeys which involve crossing the CBD. This appears to us an area worth looking at and the possible need for PT routes which do not enter the CBD (e.g. a Miramar to Karori via the south coast route).
41. We support: the "Sustainable transport hierarchy in the Wellington Urban Growth Plan"; and "Integrated bus ticketing 2018."<sup>38</sup>

<sup>28</sup> LGWM "Data Report"(28 August 2017) pp. 45ff.

<sup>29</sup> LGWM "Data Report"(28 August 2017) pp. 64-67.

<sup>30</sup> LGWM "Data Report"(28 August 2017) p. 68.

<sup>31</sup> LGWM "Data Report"(28 August 2017) p. 49.

<sup>32</sup> LGWM "Data Report"(28 August 2017) p. 50.

<sup>33</sup> LGWM "Data Report"(28 August 2017) pp. 62, 64, 66.

<sup>34</sup> LGWM "Data Report"(28 August 2017) pp. 62, 66.

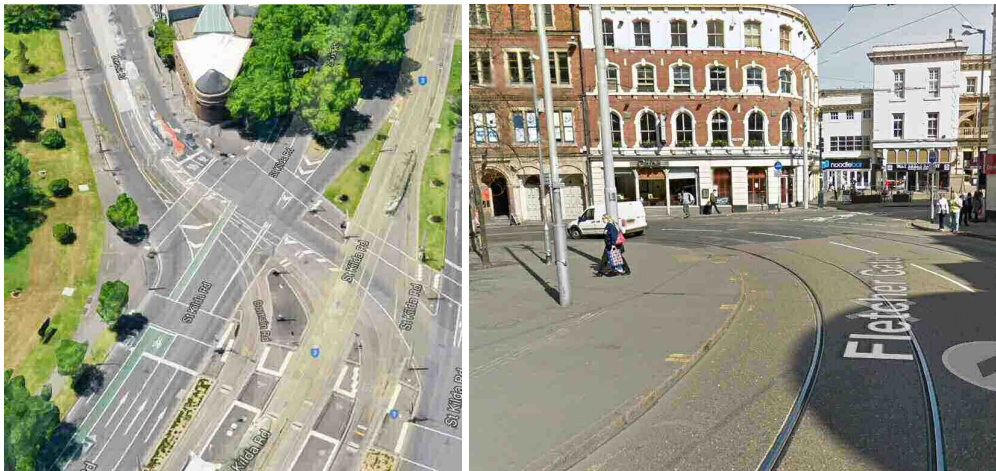
<sup>35</sup> LGWM "Data Report"(28 August 2017) p. 9.

<sup>36</sup> LGWM "Data Report"(28 August 2017) p. 9.

<sup>37</sup> LGWM "Data Report"(28 August 2017) p. 10.

<sup>38</sup> LGWM "Case for Change (November 2017) p. 3.

42. With respect to cycling:
- (a) we support Vivian St cycle lanes (Scenario C)
  - (b) we encourage work on intersection design and CBD routes for cyclists
  - (c) we support changes to the District Plan to ensure provision of "End of Trip Facilities for Walking and Cycling," such as showers and secure bike parking, being required in work places (*"End of trip facilities are an important aspect determining if people choose to cycle. Safe and secure parking is a must have and showers are beneficial if you are trying to attract people to cycle long distances"*).<sup>39</sup>
43. We challenge the assumption that heritage buildings are to be moved out of the way of any roading/transport design. This is apparent in the statement that *"Items of natural or cultural heritage are known to exist within the space required by the interventions. The cost estimates have allowed for relocation of Cultural Heritage Buildings."*<sup>40</sup> This contradicts the "Baseline Report: Land Use and Urban Form" which states that LGWM *"has the potential to improve the setting of heritage buildings by reducing vehicular traffic around protected buildings and through heritage areas."*<sup>41</sup> We encourage LGWM to be more sensitive in its approach to the built environment. While we note that *"curve radii to achieve speeds of 30km/h or higher will require significant property take at multiple locations,"*<sup>42</sup> there are many places in the world (e.g. Melbourne, Istanbul, Sophia, Nottingham (e.g. Figures 13 and 14)) where transport speed appears to be sacrificed to the built environment.



Figures 13 and 14: Melbourne tram route; Nottingham tram tracks around corner

44. We also note that the WSP report, in its comparison between BRT and LRT states that *"[t]he larger BRT vehicles currently require more road space (width) than light rail, and require more space at corners due to the swept path required. Currently they [BRT] can only be driver in one direction, which means that sizeable turning areas are required at the terminal points."*<sup>43</sup>

Thank you for this opportunity to comment on the proposed Let's Get Welly Moving scenarios and accompanying documentation. We acknowledge that several of these issues/suggestions are outside of a narrow LGWM brief, but ask that you encourage

<sup>39</sup> Travel Demand Management Study 2017: Stage 1 report (10 March 2017) Appendix A, pp. 18, 22

<sup>40</sup> "Scenario Costing Report" (13 November 2017) p. 10.

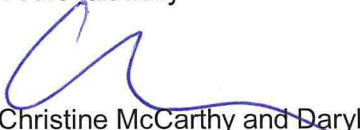
<sup>41</sup> "Baseline Report: Land Use and Urban Form" (14 June 2017) p. 49

<sup>42</sup> BRT Investigation Report p. 27

<sup>43</sup> WSP "Wellington Mass Transit Independent Review" (October 2017) p. 17.

any ideas that you see merit in to your component councils/NZTA. If you have any questions please do not hesitate to contact us.

Yours faithfully

A handwritten signature in blue ink, appearing to be a stylized 'C' or 'M' followed by a long horizontal stroke.

Christine McCarthy and Daryl Cockburn  
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