TRANSPORTATION 2022 CONFERENCE
THE WELLINGTON COMMUTER PARKING LEVY (WCPL)
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Abstract

The Let's Get Wellington Moving (LGWM) proposed programme of works includes the Wellington Commuter Parking Levy (WCPL). There has been increased interest in the use of pricing tools in New Zealand, as highlighted by the Ministry of Transport *Transport Emissions: Pathways to Net Zero by 2050* consultation document, and the WCPL, if implemented, would be the first Parking Levy in New Zealand.
As set out by LGWM, the objectives of the WCPL are to firstly, achieve a modal shift (with the overall LGWM objective of a 20% reduction in vehicles entering the CBD in the AM peak) thus contributing to a reduction in carbon emissions and secondly, to raise revenue to fund future LGWM public transport and active mode improvements. The LGWM programme is also an important part of Wellington's journey to becoming carbon neutral by 2050, with the programme contributing an 18% reduction in emissions within the CBD.
The study involved identifying what the WCPL would look like, its viability, how it fits in with the overall LGWM work packages and how it can be implemented. Commuters' attitudes to increases in parking costs within the CBD were surveyed, along with consultation with key stakeholders.
This presentation will describe development of the WCPL including results from the economic and financial modelling and national legislative changes required. The results in terms of the predicted mode shift and predicted annual revenue raised will be presented. The study involved considering a wide range of options and key lessons learnt for the implementation of the Levy to ultimately achieve a long-term change in how people travel in New Zealand will be discussed.
LGWM have commenced consultation on the LGWM proposed programme of works (including the WCPL and a high-level congestion charge study) and a key decision the LGWM Programme will make following consultation is whether priced Transport Demand Management will be implemented and in what form.

1. Introduction

1.1 Transport Pricing and Management

There has been recent increased interest in the use of pricing tools in New Zealand as highlighted by the Ministry of Transport's *Hīkina te Kohupara – Kia mauri ora ai te iwi - Transport Emissions: Pathways to Net Zero by 2050* consultation document and recent work on congestion pricing options for Auckland (The Congestion Question). The Governments Emissions Reduction Plan (expected at the end of May 2022) will identify policies and pathways to a net zero emission transport sector. The Consultation document includes, in Theme 1 (changing the way we travel), as part of Transport Pricing and Management, the implementation of workplace/private property/commuter parking levies as a measure to significantly influence demand for parking and encourage people to shift to more sustainable transport modes. In terms of timescales, the consultation document indicates the Budget Period of 2022-25 as the period to develop and implement the Transport Pricing and Management measures.

1.2 What is a Parking Levy?

Internationally there are currently four Parking Levy schemes, one in the UK (Nottingham) and three in Australia (Perth, Sydney and Melbourne). A Parking Levy is a charge imposed by a transport authority on a parking space. Although there are differences amongst these four schemes (e.g., which parking spaces are liable, who is responsible for paying the levy and how the Levy funds are used), essentially, the aim of these Levy schemes is the same and that is to discourage car use by placing a charge on a parking space.

1.3 What was the purpose of the Wellington Commuter Parking Levy (WCPL) project?

Colin Shields was appointed by Let's Get Wellington Moving (LGWM) (a partnership of Wellington City Council, Greater Wellington Council and Waka Kotahi), to lead a multidisciplinary team (including financial, economic and legal and tax experts, market researchers and Nottingham City Council) to:

- Assess the potential effectiveness of a Parking Levy in Wellington CBD and:
- If the assessment suggests that it would be effective, then how it might be feasibly implemented to meet the objectives of LGWM.

The scope of the Parking Levy project was defined by a number of specific requirements including:

- At the time of the study, Ministerial political direction that for Wellington, a Parking Levy was the only demand management measure that could be considered.
- The Parking Levy boundary was defined as the Wellington CBD.
- The Parking levy was to apply to commuter off street car park spaces only.

2. WCPL objectives and evaluation criteria

2.1 Objectives

The objectives of the WCPL were defined as:

- Encourage mode shift (away from private vehicles) – this would contribute to the LGWM Programme Objective of reduced reliance on private vehicles.
- Provide a potential revenue source for the LGWM partners'.
- Improve network efficiency - this would contribute to the LGWM Programme Objective of provide more efficient and reliable access to support growth by reducing congestion and improving accessibility.
- Equity which includes vertical equity (eg impact on different socio-economic groups, with different levels of ability to pay) and horizontal equity (eg are the people paying for the policy the same people benefiting from it?). This would contribute to the LGWM Programme Objective of Liveability.
- Reduce Carbon emissions – emissions are projected to decline due to changes in the vehicle fleet (fuel efficiency and electric vehicles) with the LGWM programme also contributing to a reduction.

2.2 WCPL evaluation criteria

The following evaluation criteria was established to evaluate the effectiveness of the WCPL:

- Strategic Fit - how does the WCPL fit with LGWM and its partners' strategic outcomes for the area and the achieve the objectives, as set out above, for the WCPL?
- Acceptability/Feasibility – how easily can the WCPL be implemented and how is it acceptable politically, by the public and by stakeholders? This would also include transparency and accountability of the WCPL.
- Efficiency – how efficient is the WCPL eg its ability to raise revenue relative to costs, including the potential for leakage/avoidance and the extent to which the revenue source is stable, predictable? Also covers the cost of collecting the revenue, costs to setup and administer the levy, including compliance costs for liable parking spaces. Are there any undesirable spin-off effects?
- Affordability – the extent to which the WCPL is affordable, i.e. the cost of it compared with what people are willing to pay.

3. Work carried out

3.1 Key work aspects included:

- Defining the supply, demand and pricing of off street car park spaces in the Wellington CBD. This was carried out using a variety of data sources and GIS analysis. Trends over recent years were analysed (e.g., the impact of the 2016 earthquakes – see **Image 1** below of the demolition of the Reading car park and **Figure 1** of an example of the GIS analysis).
- National, regional and local policy literature review.
- Best practice review of the 4 international PL schemes.
- Market research consisting of Stated Preference Surveys (see **Figure 2** below of example data analysis) and meetings with external stakeholders.
- Financial Modelling.
- Economic appraisal.
- Legislative review.
- Identification of implementation pathways.

Image 1 Demolition of the Reading car park

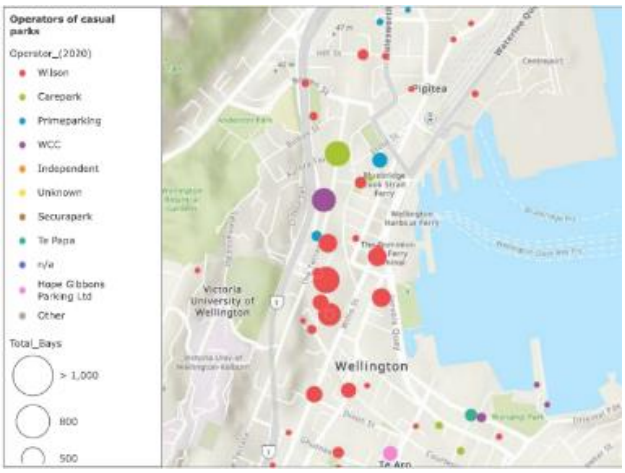

Figure 1 GIS analysis example - Public Carparks

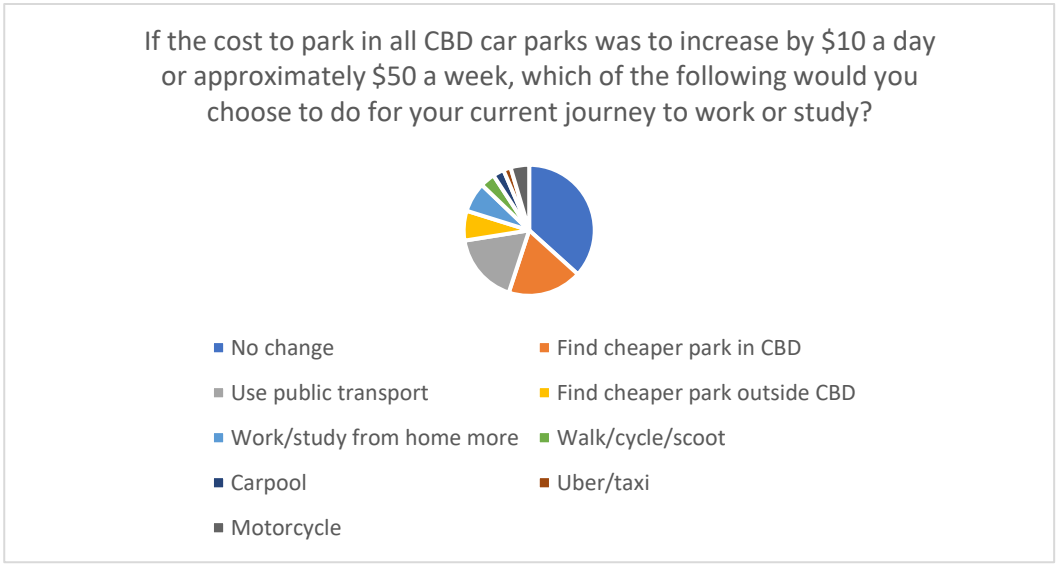

Figure 2 Example Stated Preference data analysis

4. What does the WCPL look like?

4.1 WCPL Boundary, Charges and What is a Leviable Space?

All long-stay (commuter) parking spaces in the CBD would be leviable. The CBD boundary is shown below in **Figure 3**.

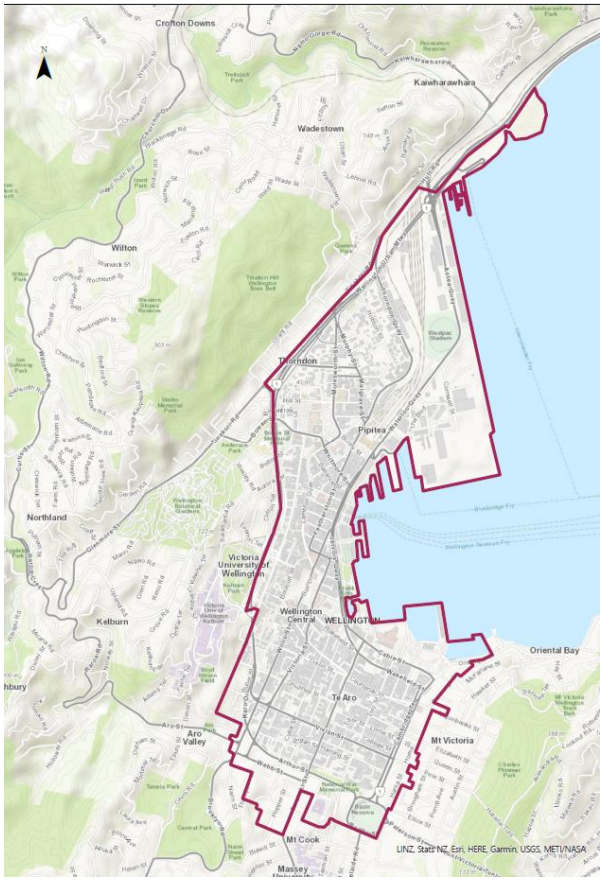

Figure 3 WCPL boundary

A range of Levy options were considered (ranging from $500 to $5,000 p/a per parking space). The preferred option was a levy amount set at $2,500 per annum in the Thorndon/Lambton Quarter area and a $1,750 per annum levy in Te Aro and Pipitea area. The WCPL would be managed by Wellington City Council.

A leviable long-stay (commuter) parking space was defined below under the following two types:

Type 1 – Private (employer) off street car parks

The WCPL would apply to all occupier(s) of premises where private off-street parking spaces (ie that are not available for use by the general public) are occupied by a motor vehicle used by an:

- Employee.
- Regular Business Visitor.
- Student.

The Levy is a charge made on the total number of leviable parking places provided by an occupier at any one time.

For Type 1 the following would be exempt:

- Locations where there are 10 or less parking spaces in total.
- Emergency services vehicles.
- Parking spaces allocated for Mobility Parking permits.
- Embassies and High Commissions.
- Parking spaces allocated for customers.
- Parking spaces allocated for loading/unloading.
- Parking spaces allocated for cycles and motorcycles.

For Type 1, the occupier of the premises would be liable to pay the levy.

Type 2 – Public Off street Car parks

- All public car park spaces would be leviable, with an exemption being made of casual car park spaces that are not used by commuters on a working day. Whether or not a casual parking space has been used on a particular working day by a commuter was defined as any casual parking space unused at 1000 on a working day.
- Where a parking space set aside for the parking of a motor vehicle under an arrangement (usually, a lease or license) which gives a person the use of it to the exclusion of any other parker (a reserved parking space) was not defined as a casual parking space.

The following would be exempt:

- Parking spaces allocated for Mobility Parking permits.
- Parking spaces allocated for cycles or motorcycles.

For Type 2, the operator of the public car park would be liable to pay the levy.

4.2 Lifespan of the WCPL and Hypothecation of revenue

As with the existing international Parking Levy schemes, the lifespan of the WCPL would be indefinite. This would allow the WCPL to fund ongoing investment in public transport, active mode and behaviour change initiatives. A three-year phase in period for the levy charge was proposed, with year 1 of operation, 33% of the full amount of the levy charged, in year 2, 66%, and, finally, in year 3, 100% of the level of the levy.

Hypothecation (i.e. ring fencing of the net proceeds for transport projects) of the revenue from the WCPL to fund LGWM and future transport packages was considered essential to ensure:

- Provide ongoing funding of public transport, active mode and behaviour change initiatives.
- Likely to be more politically and publicly acceptable i.e., it's not just considered to be another tax.

4.3 Legislation/regulatory changes

The recommended implementation pathway for a Parking Levy for Wellington was by way of specific enabling national legislation ie a Parking Levy Act. Bespoke legislation, which unequivocally authorises the imposition of a Parking Levy would provide the greatest legal certainty. This should be a public Act rather than a local Act, to enable other NZ authorities to implement a Parking Levy should they wish. The public Act would empower any local authority that chooses to do so to impose a Parking Levy on all eligible car parks within its jurisdiction and contain a corresponding power for local authorities to exempt certain areas and certain uses from any levy, as well as allow a local authority to set the rate of the levy, potentially on a differential geographic basis. A consequential amendment to the GST Act may also be necessary to confirm that payment of the levy is considered as a taxable supply, and therefore subject to GST.

5. Key findings

5.1 Financial Model

Using data collected and research carried out (eg on the number and types of off street car parks, elasticity of demand and supply, car park charges, vehicles entering the CBD in the peak periods, the pass through of the levy from owners and operators to commuters, and displacement of cars to parking outside of the CBD), a financial model was built to test a number of scenarios and options. Although the Parking Levy charge would include GST, all cost and revenue outputs calculated from the model exc GST.

5.2 Predicted mode shift impacts

The introduction of a levy of $2,500 alone was predicted to reduce the total volume of car trips from 19,748 to 17,732, a reduction of 2,016 (10.2%) car trips to Wellington CBD each weekday, as shown below in **Figure 4**, with the mode shifts ranging from 3% with a $500 charge to 18.6% with a $5,000 charge:

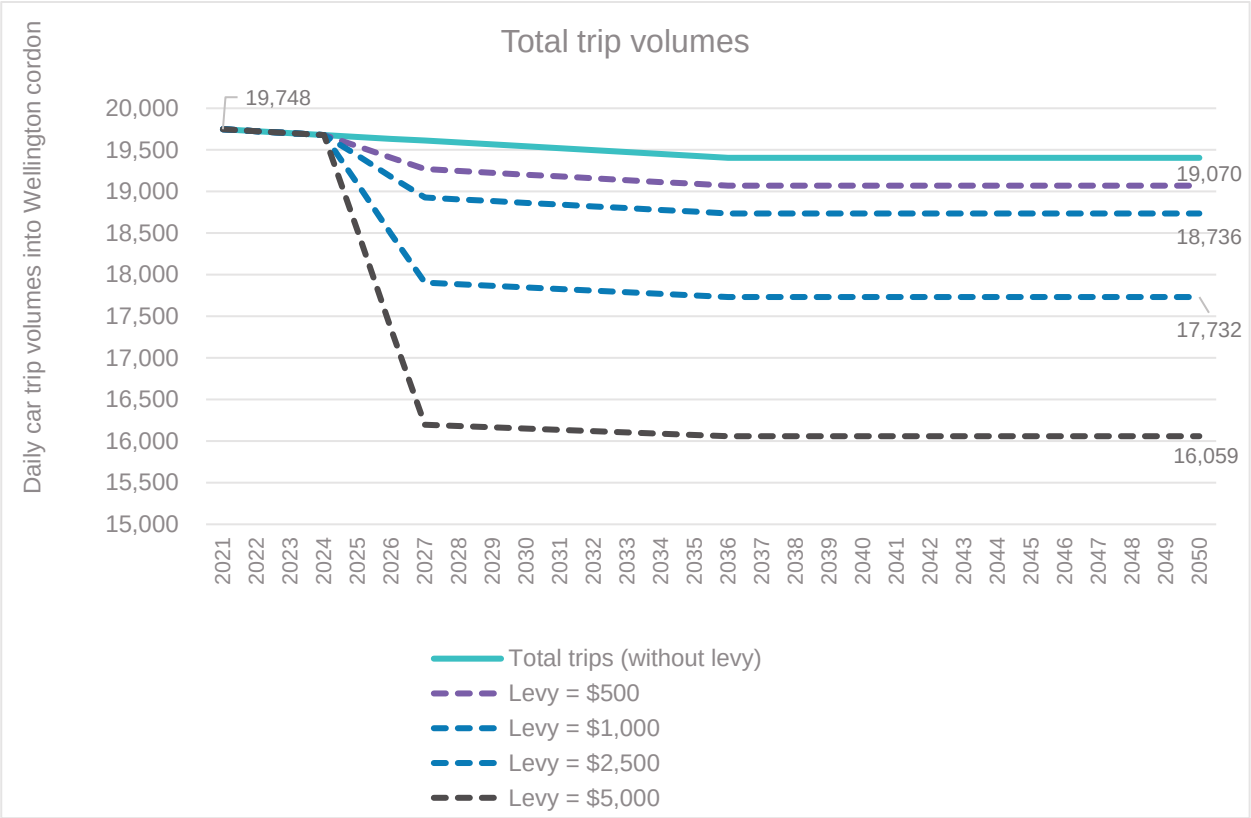

Figure 4 Predicted mode shift impacts

5.3 Predicted reduction in leviable car park spaces with the WCPL

The introduction of a levy of $2,500 alone was predicted to reduce the total number of CBD commuter car park spaces from 19,527 to 16,991, a reduction of 2,536 (13%) as shown in **Figure 5** below:

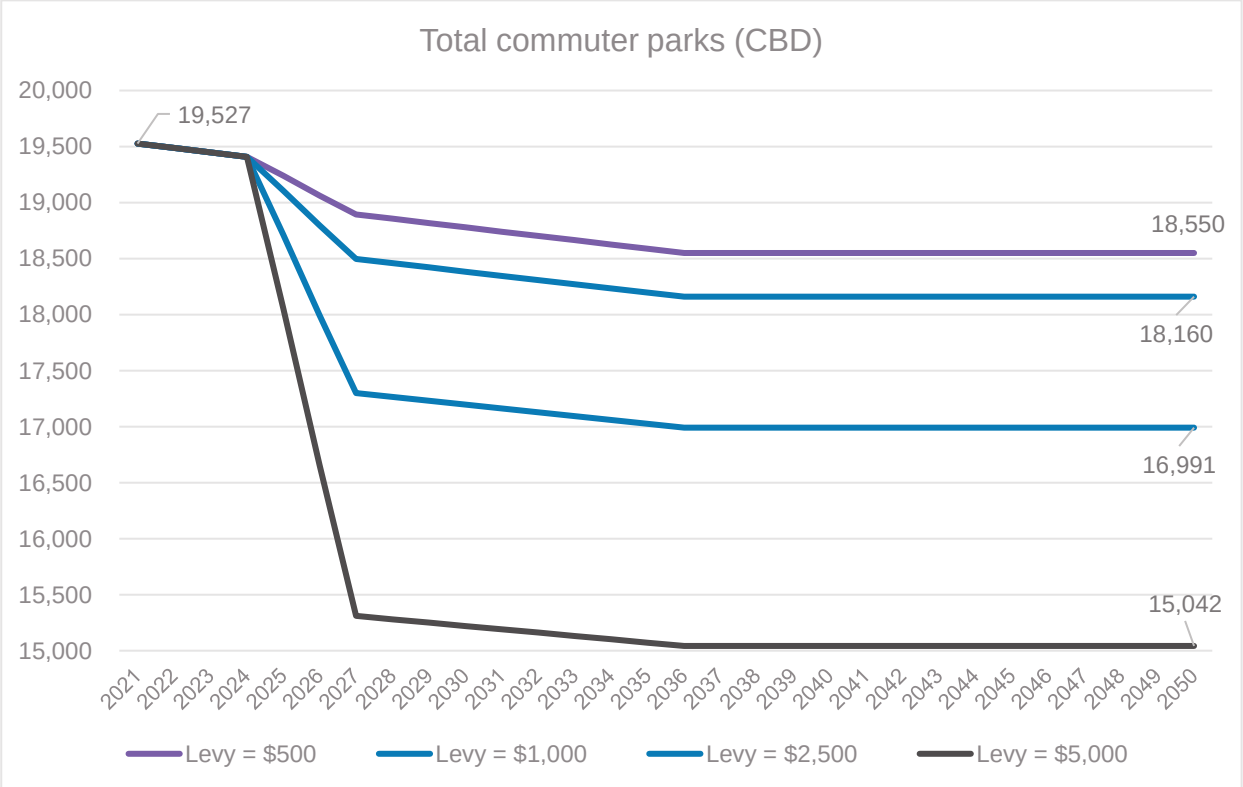

Figure 5 – Predicted reduction in leviable car park spaces

5.4 Displacement of car parking to areas outside of the levy boundary

The financial model predicted a small proportion of commuters would, instead of paying the levy, displace to areas immediately adjacent to the levy boundary. Work would be required (as part of any future WCPL scheme development) to understand supporting parking management plans that may be required prior to the implementation of the WCPL, to limit the impact of displaced parking.

5.5 WCPL costs and revenue

WCPL implementation costs were estimated at $3.76m and operational costs were estimated at $1.33m per annum.

A levy of $2,500 (and $1,750 per annum in low-price zones) was predicted to generate up to $28m in gross revenue per annum. Gross revenue per annum predicted for the range of levy amounts modelled is shown in **Figure 6** below:

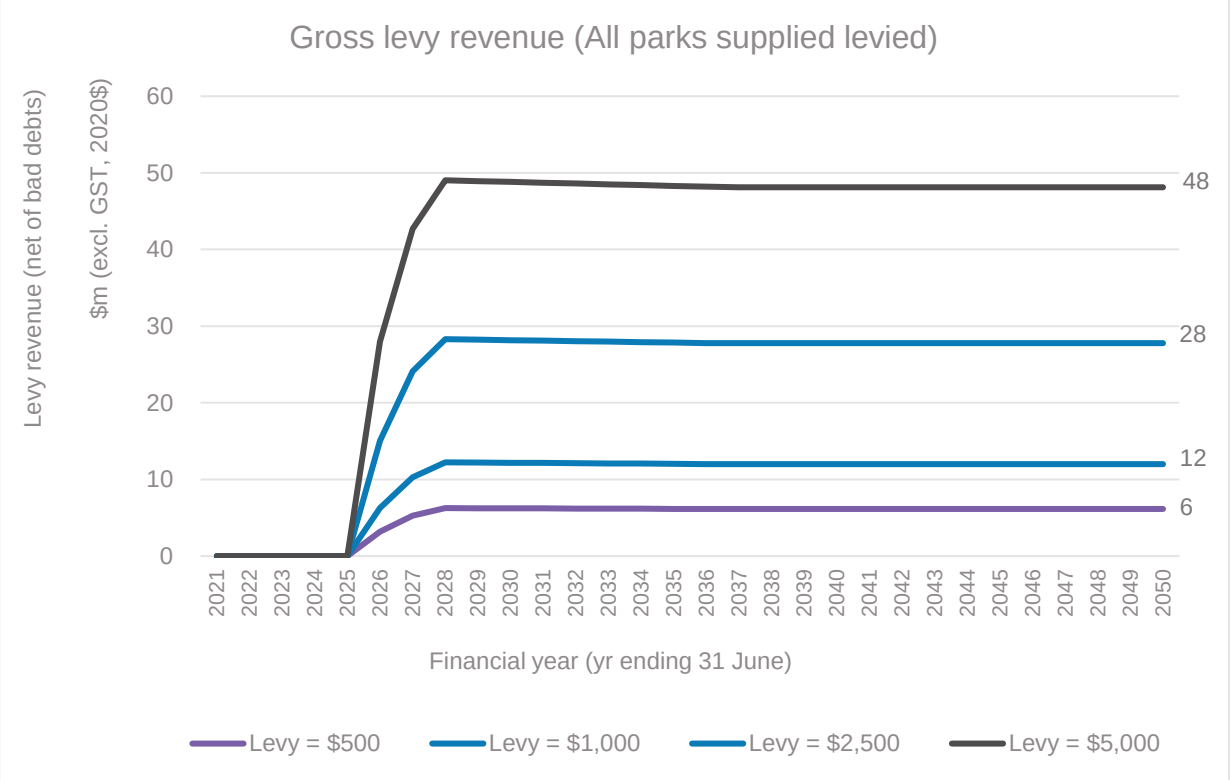

Figure 6 - Gross revenue

5.6 Economic assessment

The economic assessment indicated the following:

- Total economic costs (administration costs plus deadweight cost) = $3.1 million per year.
- Congestion reduction benefits were calculated within a range of $3.3 to $9.2 million per year.
- This results in a Benefit Cost Ratio (BCR) of greater than 1 (range is 1.6 to 3.5), which is a strong initial argument for the WCPL.
- There are many unquantified benefits, including reduced externalities from driving and parking, freeing up road space, liveability and more efficient public transport.

- Land use, economic competitiveness and agglomeration effects although not quantified, were estimated to be positive (assuming that the WCPL funds are hypothecated).

5.7 Equity assessment

The equity assessment indicated the following:

- WCPL satisfies vertical equity criteria since it would be predominantly paid by people on higher incomes. Wellington residents, and especially commuters who drive to the CBD, are generally well-placed to bear the levy burden.
- Horizontal equity is more complex. The key issue here is that drivers who are passing through, dropping someone off or delivering passengers (eg taxi/ Uber drivers) will not pay the levy even though they are contributing to traffic volumes, and this detracts from equity (a 'free rider' problem). However, equity is improved by exempting disabled spaces and charging a lower rate for Te Aro.

6. Key overall learnings and implications for similar work

Some of the key learnings from this project included:

6.1 COVID 19

COVID 19 and its medium to long term impact on travel behaviours (eg working from home and lower levels of public transport usage) remain uncertain. A key point to note in respect of the WCPL (and indeed for other LGWM Packages) is whether any long-term structural changes arising from COVID 19 (e.g., working from home) actually achieve greater reductions in vehicles entering the CBD in the AM peak. This will require monitoring of the situation and adaptation of the WCPL modelling accordingly. In considering the impacts of COVID 19, it is important to note that it could also be seen as a potential short-term impact, whilst reducing the number of car commuters parking in the CBD should be considered as a long-term impact. As such it is important not to lose sight of the bigger picture.

6.2 WCPL should not be viewed in isolation

Integration of the WCPL with the Wellington City Council (WCC) Parking Policy and District Plan is considered essential since the WCPL needs to be supported with a strong complementary parking policy, reduced or reallocated on street parking and improvements in public transport, active travel and travel behaviour change. The positive combination of the new policies together will need to be considered as they will directly address car commuting effectively as part of the following jigsaw solution (and summarised in **Figure 7** below):

- WCPL – increases cost of parking provision, reduces or encourages change of use and increased car commuting parking costs when passed on.

- Parking Policy - manages different parking provision supply for customer groups (retail, resident, leisure, visitor, commuter etc), increases on street prices to ensure they complement the WCPL rather than undermine it, tackle displacement and reallocate places for different uses (active travel).

- LGWM Package of measures – WCPL revenue delivers a range of high-quality public transport and active travel improvements to provide increased capacity and levels of service and encourage car commuters to switch modes.

- Travel behaviour change including support for businesses and employees (eg Workplace Travel Plans and Parking Management Pans).
- Removal of minimum off-street parking requirements (except for accessible car parks) and the introduction of WCPL could encourage commercial developments to provide limited employee/long stay parking spaces.

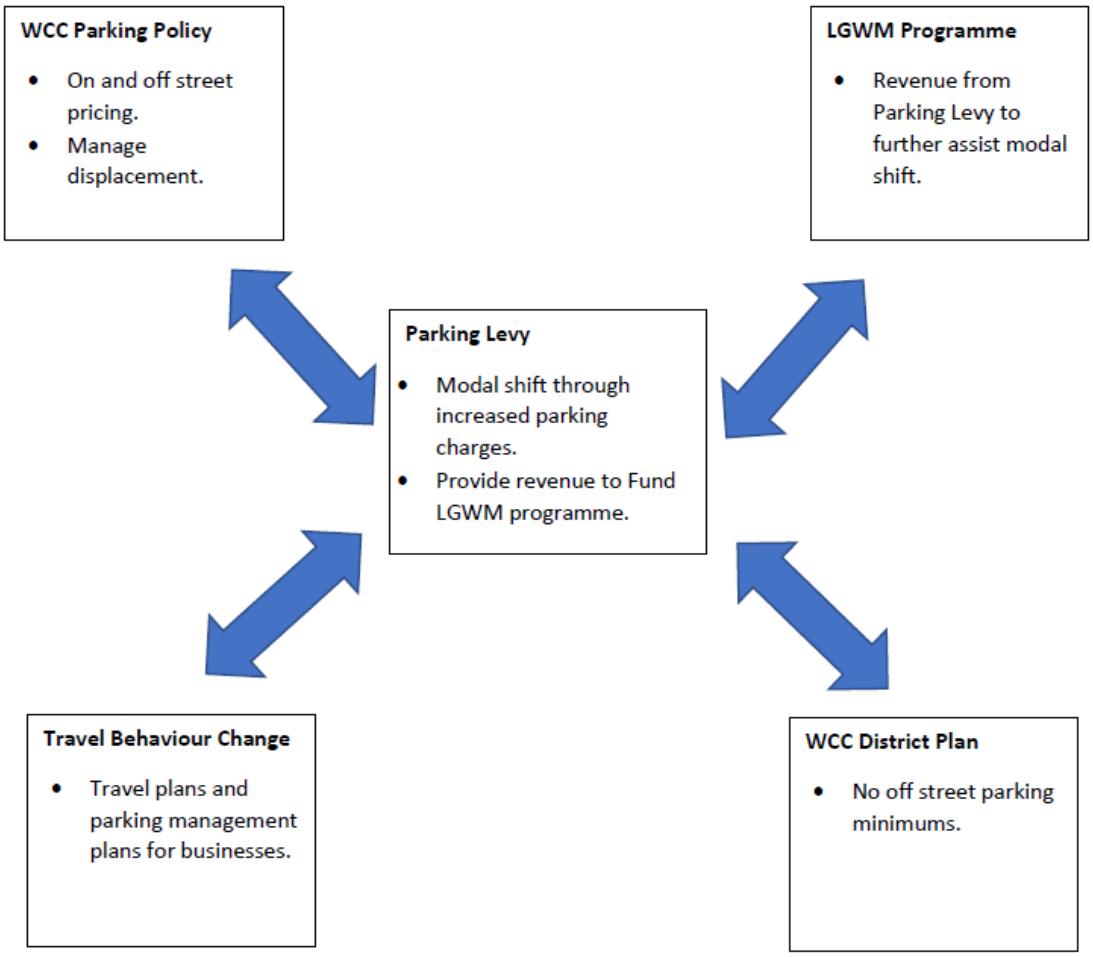

Figure 7 Integration of the WCPL with WCC Parking Policy, District Plan, LGWM Programme and Travel Behaviour Change

6.3 Displaced parking to on street parking within the CBD

Although outside the project stated scope, within the CBD there are on street spaces available for use for long stay parking (namely Coupon Parking and 10-hour maximum meter parking). It was considered appropriate to include these spaces as part of the WCPL and manage these through the complementary WCC Parking Policy because:

- Public perception of WCC: simultaneously levying private commuter car parking providers while exempting WCC controlled commuter and 10-hour maximum meter car parking could be seen as unfair/hypocritical by the public and jeopardise the success of the WCPL scheme.
- It is at odds with the desired outcome of the WCPL. While it may represent a relatively small proportion of commuter parking in the CBD, including coupon and 10-hour maximum meter car parking in the WCPL scheme will contribute to the desired outcomes of the programme:

discouraging car commuting to the CBD, raising revenue, and prioritising parking for short stay and residents use instead of commuter use.

6.4 Possible unintended consequences of WCPL included:

- As with any scheme that aims to reduce congestion or 'take cars off the road', there is a risk that induced/latent demand will arise to fill some of the road space freed up by the WCPL.
- CBD residents could rent out more of their car parks to commuters if they are able to avoid the levy. This threatens the levy objectives and could have the perverse outcome of more parking being built in apartment developments.
- The levy could encourage more people to commute by taxi/ Uber, since the roads would be clearer.
- Some parking owners could avoid the levy by selling off their parks individually or in chunks of up to 10 (depending on the exemption level). The car parks will keep being used by commuters, who won't have to pay the levy.
- Do we want to encourage people to drive to the CBD as long as they do it during off-peak times? The preferred levy design focuses on commuters, but this means that casual prices could actually fall. On the other hand, this could help to compensate for a loss of on-street parking as part of the wider LGWM Package of schemes. Or do we want to reduce the number of people driving during off-peak times as well?
- Should through traffic, drop-offs and taxis/ Uber be able to 'free ride' into the CBD while those who park, pay the cost?

6.5 Other wider considerations included:

- Should the WCPL supplement, or replace, the existing City Council transport targeted rate?
- Should the public sector reduce the number of carparks they lease and the number that they provide to staff for commuting purposes?
- Should changes be made to the Fringe Benefit Tax (FBT) regime to make it more mode neutral? Parking provided by an employer (either on site or leased in another car park) for its staff is exempt from FBT. By contrast, the provision of other travel-related employment benefits, such as subsidisation of an employee's public transportation or active transport mode (eg, employer subsidies of scooters or bikes) costs, will generally be taxable to the employee (under the PAYE system) or subject to FBT.

7.0 What Happens Now?

At the time of carrying out the WCPL study, Ministerial political direction was that for Wellington, a Parking Levy was the only demand management measure that could be considered. Following completion of the WCPL study and the publication of the Ministry of Transport's *Hīkina te Kohupara – Kia mauri ora ai te iwi - Transport Emissions: Pathways to Net Zero by 2050* Green Paper, LGWM have undertaken a very high-level study of Congestion Charging.

On 2/11/21, LGWM commenced consultation on the LGWM proposed programme of works, with feedback and more detailed proposals expected in early 2022. Transport Demand Management is part of the integrated LGWM programme of works, with the detailed Parking Levy study and the high-level Congestion Charging study also being consulted on. A key decision the LGWM Programme will make following consultation is whether priced Transport Demand Management will be implemented and in what form. Implementation timescales of a Parking Levy or Congestion Charge scheme is indicated in the LGWM consultation as 2028/29.

8.0 Conclusions and Recommendations

Using the evaluation criteria identified for the WCPL**,** the following is concluded with a Parking Levy of $2,500 per annum in the Thorndon/Lambton Quarter area and $1,750 per annum n Te Aro and Pipitea area:

- Strategic Fit - The WCPL aligns with its objectives of:
  - Reduce the number of vehicles entering the CBD in the AM peak - the WCPL is predicted to reduce this by 10.6%, although this reduction on its own does not meet the 20% reduction as envisioned for the LGWM packages of work.
  - Provide a potential revenue source for funders – achieved with a return of circa $28m p/a.
  - Improve network efficiency – achieved with predicted congestion reduction benefits of $3.3m to $9.2m.
  - Equity –analysis of various indicators confirms that the WCPL would be broadly equitable: it performs strongly in terms of vertical equity, and relatively well in terms of horizontal equity.
  - Reduce Carbon emissions – the predicted higher end congestion reduction benefits calculated for the WCPL include a carbon reduction cost as a result of the predicted modal shift.
- Acceptability/Feasibility – The WCPL will require legislative changes which could be challenged politically (given previous opposition in New Zealand to introducing Fringe Benefit Tax on car park spaces provided as part of an employment package). To be feasible, the WCPL needs to be implemented as part of a package of measures ie the LGWM packages (eg public transport and active mode improvements). With these in place, commuter's acceptability of the WCPL will be increased. Based on meetings with stakeholders (including property owners/occupiers and public car park operators) there are likely to be objections but, by hypothecating revenue raised into LGWM public transport and active mode improvements, then the WCPL is considered to be fully transparent and accountable.
- Effectiveness – By charging occupiers and car park operators, the WCPL is reasonably straightforward to collect. There will be initial upfront costs to prepare, consult and implement the Levy but, once in place, it should be a stable and reliable source of funding.
- Efficiency – a parking charge that raises the cost of private vehicle travel closer to marginal social cost should be efficient, but it is a direct tool, and not all costs will be passed onto the car park user when the property occupiers and car park operators are levied. Reduced demand for long term car parking spaces in the CBD to be used by short stay non commuters also could allow land/floor space to be used for more productive purposes (e.g. office space). Potential displaced parking impacts on the fringe CBD coupon and residential streets will need to be managed.
- Affordability – The annual levy targeted at commuter parking would be affordable with costs likely to be spread between property occupiers, car park operators and motorists.

Overall, the implementation of a Parking Levy will be complementary to the LGWM programme and will make a meaningful contribution to shifting the dial on some of the LGWM objectives.

9.0 Author Contribution Statement

Colin Shields (formerly of Candor 3 when working on this project) led the WCPL project and prepared this paper. Assisting Colin on the project were Curia, Martin Jenkins, Nottingham City Council, ptc, RCG and Russel McVeagh.