BEFORE THE QUEENSTOWN LAKES DISTRICT COUNCIL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Proposed Plan Change 50, Queenstown Town Centre Zone

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STATEMENT OF EVIDENCE

Evidence of: TIM KELLY, Director Tim Kelly Transportation Planning Ltd

Subject Area: Transportation Issues

On Behalf Of: Memorial Property Ltd

Date: 14 November 2014

INTRODUCTION

1 My name is Tim Kelly. I am a director of my own traffic engineering and transportation planning practice.

2 I have worked in the traffic engineering and transportation planning field since 1983. I hold a Bachelor of Arts degree in Geography, and a Master of Science degree in Traffic Engineering and Transportation Planning, both from the University of Sheffield in the United Kingdom.

3 I am a full Member of the Chartered Institute of Logistics and Transport, and the IPENZ Transportation Group (a Technical Interest Group of IPENZ).

4 My career to date has been spent in the consultancy sector of transportation, in both the United Kingdom and New Zealand. During my career, I have provided policy advice regarding traffic and transportation matters, and undertaken assessments for a wide variety of development proposals.

5 This experience includes work on a number of projects in the Queenstown area, including plan changes 19 (Frankton Flats B), 43 (Frankton Mixed Use Zone) and 44 (Henley Downs). I have also been responsible for transportation assessments associated with proposed plan changes across New Zealand.

CODE OF CONDUCT STATEMENT

6 I have read the Code of Conduct for Expert Witnesses issued as part of the Environment Court Practice Notes. I agree to comply with the Code and am satisfied that the matters which I address in my evidence are within my field of expertise. I am not aware of any material facts that I have omitted which might alter or detract from the opinions I express in my evidence. I understand that I have an overriding duty to assist the hearing in an impartial manner and that I am not an advocate for the party which has engaged me.

INVOLVEMENT IN PC50

7 I have been engaged by Memorial Property Ltd to review the transportation aspects of Plan Change 50 (PC50). This is in the context of concerns raised with regard to the anticipated effects of the PC50 upon the operation of the transportation network in the Queenstown town centre area.

8 In doing so, I have reviewed relevant material, including the s32 report, the TDG assessment, the s42A report and evidence.

KEY ISSUES

9 I believe the key transportation issues can be expressed as:

- with PC50 likely to significantly affect volumes and patterns of travel demand, what is the context in terms of existing travel characteristics?
- what strategic framework exists to ensure that the necessary changes in travel behaviour are achieved?
- have the transportation assessments for PC50 been based upon assumptions which are clearly stated and reliable, particularly with regard to land-use changes?
- is there any risk that a pattern of land-use enabled by PC50 could result in higher levels of development and travel demand than assessed, resulting in potential adverse effects upon the town centre area?
- have the assessments been subject to any sensitivity testing or peer review to provide confidence in their conclusions?

10 These are the issues which I address in my evidence.

CHARACTERISTICS OF TRAVEL IN QUEENSTOWN

11 Queenstown has seen significant growth in population and transportation demands in recent years. A review of these demands provides a useful insight into transportation trends in the area which is relevant to the consideration of PC50.

12 **Table 1** summarises population, journey-to-work and household car occupancy information for the Queenstown district from the census for the years 1996, 2001, 2006 and 2013. Also shown are recorded traffic volumes on Stanley Street (State Highway 6A) for the same years.

13 This information indicates that over the 17 year period 1996 – 2013 the population has almost doubled. At the same time, both the rate of vehicle ownership and the percentage of travel by car have shown significant increases. Unsurprisingly, this combination of factors has led to large increases in traffic activity.

14 In the most recent 7 year period from 2006, car ownership, use and traffic volumes have moderated, with some increased use of other modes of travel (buses, walking/cycling) for the journey to work.

Measure	**Year**			
	1996	**2001**	**2006**	**2013**
Population	14,280	17,040	22,960	28,220
Journey to Work;				
% by car/van	54.3%	55.2%	59.0%	57.3%
% by bus	1.2%	0.8%	0.6%	1.3%
% by walk/cycle	16.8%	13.7%	12.3%	14.1%
Vehicles/Household	1.67	1.80	1.95	1.91
SH6A Volumes	11,770[1]	13,170	17,630	15,660

Table 1: Census and Traffic Count Information, Queenstown District 1996 – 2013
Sources: Statistics NZ, NZ Transport Agency

16 This more recent trend is likely to be explained in part by improved bus services and other incentives (including congestion and parking availability) to reduce car use. Economic conditions also play a part, with higher costs reducing the attractiveness of vehicle ownership and use, especially for younger people.

[1] *This volume relates to 1997 (no 1996 figure available)*

17 Despite the improvement in bus use, the numbers using the service are low. In 2013, the number of passengers using this mode for the journey to work was only 220.

18 These figures are confirmed by screenline counts undertaken by the Council in March each year. For 2014, these indicated that 85% of people travelling into the town centre on the three main arterial routes did so by car, with only 2% travelling by bus, 1% cycling and 11% walking.[2]

19 The relevance of this for the consideration of PC50 is that (as I explain later), an ability to accommodate the additional travel demands associated with PC50 appears heavily reliant on securing significant changes in travel behaviour if adverse effects are to be avoided. In reality, historical changes in travel behaviour have been modest, variable over time and subject to a range of external economic factors. An ability to easily access the Queenstown town centre area by private car is likely to continue to be a key factor in its attractiveness as a commercial and tourist centre.

STRATEGIC FRAMEWORK

20 The Wakatipu Transport Strategy (WTS), prepared in 2007, envisaged a high frequency (four-minute) bus service, bus priority lanes on Frankton Road and a Kelvin Heights ferry service.

21 Seven years later, limited progress has been made. Improvements have been made to the bus service, but with a maximum 15-minute headway (between Queenstown and Frankton), and no priority lanes to reduce delays experienced during peak period traffic. The Kelvin Heights ferry service has not been initiated.

22 Faced with forecasts of rising traffic volumes in the town centre area, the Inner Links project was developed to provide an alternative route for traffic to avoid the busiest parts of the inner road network. Following assessments which identified that the project would have a poor economic performance, and concerns that it focused upon and possibly encouraged private car travel, the project has been placed on-hold. Instead, the Council has undertaken to investigate the potential for constraining traffic demands which could then defer or even avoid the requirement for the Inner Links project.

23 Analysis undertaken by the Council broadly suggests that, without additional road

[2] *QLDC Report for Agenda Item 6 to Planning and Infrastructure Committee. June 2014.*

capacity, problems can only be avoided if aggressive Travel Demand Management (TDM) measures are introduced which shift 20% of car travel to other modes.

24 The measures by which the Council intends to achieve such an ambitious change in travel are expected to be identified in a transportation strategy which is expected to be available, in draft form, in February 2015.

25 While I support the intent of such a strategy, I consider the achievement of change on this scale to be optimistic.

26 This is partly because seeking to promote mode shift by controlling the supply and costs of public parking is fraught with difficulties around acceptance and impacts, with a likelihood that more people would be encouraged to use the out-of-town facilities at Frankton and elsewhere (where parking is available and free), contrary to the objectives of PC50.

27 Significant improvements in bus patronage are reliant upon on substantial upgrades to services in terms of frequency, coverage and priority (in terms of allocated roadspace). Such changes are costly and are unlikely to be cost-effective, reliant upon high subsidy rates which could not be sustained over the longer term.

PC50: ANALYSIS METHODOLOGY & ASSUMPTIONS

28 PC50 proposes to rezone the Lakeview site, the Isle Street blocks and Beach Street blocks from the 'High Density Residential' zone to 'Queenstown Town Centre' zone. The combined land-area is approximately 11 hectares.

General Approach

29 Assessments of the potential transportation effects of PC50 have been undertaken by consultants Traffic Design Group (TDG)[3].

30 The approach taken by TDG has been to estimate the additional traffic activity likely to be associated with activities enabled by PC50, and then to assess the effects of this additional traffic using a network model (developed by consultants Ableys for the Inner Links project). Account has also been taken of traffic activity likely to be associated with the Permitted Base Line (PBL), in this case of high density residential development.

[3] *Lakeview Plan Change: Integrated Transportation Assessment Report. Traffic Design Group, 12 August 2014.*
Lakeview Plan Change: Addendum to ITA. Traffic Design Group, 7 August 2014.
Lakeview Plan Change: Addendum to ITA (34 Brecon Street). Traffic Design Group, August 2014.

31 Having evaluated the transportation impacts of a number of plan changes, I am aware that such analyses are reliant upon a number of necessary assumptions. In my view, such assumptions should be clearly stated and subject to critical review through sensitivity testing and peer review.

Traffic Generation

32 For assessment purposes, TDG has assumed the following pattern of development[4]:

- hot pools (capacity 250 people);
- hotel (150 rooms);
- high density residential (185 units);
- commercial / retail (6,500m^2 GFA); and
- convention centre (6 meeting rooms plus main conference hall catering for up to 750 delegates / guest).

33 TDG has assessed the additional vehicular trip generation associated with these activities to be 393 and 788 trips in the weekday AM and PM peak periods respectively with a breakdown between the components of development given at Table 2 of the ITA.

34 The individual and collective trip generation calculated by TDG will be sensitive to:

- the mix of development likely to arise as a result of PC50;
- the adopted unit rates of trip generation for each development component;
- assumptions made regarding interactions between components of the existing town centre and the proposed development (for example, visits to more than one activity with a single vehicle trip); and
- assumptions made regarding mode of travel.

35 In my experience, the effects of plan changes can be problematic to assess because a pattern of development <u>enabled</u> by its provisions may be quite different from the expected or actual outturn. In such situations, I consider the appropriate analytical approach is to consider a range of <u>credible</u> development scenarios, and assess the

[4] *ITA page 14*

likelihood of effects at the limits of this range. If the transportation effects are similar, then the assessed effects may be considered to be robust. But if the analysis identifies that effects are sensitive to variation in the land-use assumptions, there is a need to revisit and adjust the provisions of the plan change.

36 In this respect, the evidence of Mr Wells suggests that the provisions of PC50 would enable up to an additional 215,000m^2 of commercial activity floorspace (compared to an existing 156,000m^2 in the town centre). He considers a credible scenario would be for, over time, at least 50% of this space being developed for retail and office purposes. This is very different to the figures assumed for the ITA, which has evaluated a single development scenario and has not addressed the inevitable uncertainty associated with this.

37 The unit rates of trip generation are not explicitly stated in the TDG assessment but can be inferred from the available information. The source and hence reliability of these trip rates is unclear, as it is not stated whether these are based upon empirical information for existing developments in the Queenstown area or elsewhere. For example, the AM and PM trip generation rates for retail / commercial development appear low at 0.46 and 0.98 vehicle trips / 100m^2 GFA respectively.

38 It is acknowledged that TDG considers the total traffic generation figure for the PM peak period to represent a 'worst-case', as this combines an assumed departure of people from a daytime convention with the arrival of people for an evening banquet.

39 In my view, the assumptions which have been made could be realistic. But without these critical assumptions being clearly stated (or subject to any form of independent peer review), it is not possible to determine their validity and hence the reliability of the conclusions which have been reached.

40 TDG considers that the additional vehicular trip generation associated with activities permitted under the current zoning, to be up to 146 vehicle movements for 183 residential units. This equates to up to 0.8 vehicle movements per residential unit.

41 While this rate is not unrealistic, it is unclear why this is higher than that assumed for the PC50 assessment, where 185 residential units were assumed to generate only 78 vehicle movements in the peak periods, a generation rate of 0.42 vehicle movements per

residential unit.

42 Section 5 of the ITA describes the use of the QLDC Inner Links model to assess the effects of this additional traffic activity in the year 2026. A number of network plots identify traffic volumes and levels of service for the baseline and plan change scenarios, in the assessed AM and PM peak periods.

43 The ITA suggests that the baseline scenario incorporates allowance for some growth of employment and households within the wider Lakeview area and that if the full development enabled by the existing HDR zoning were to occur, there would be a smaller proportional increase in traffic flows.

44 It is unclear how much growth has been allowed for and hence the extent of traffic flow increases which are attributable to the effects of PC50.

45 It is also unclear whether any assessments have been undertaken for a longer time horizon – the Inner Links traffic model includes a 2041 sub-model.

46 Plots from the traffic model included in the ITA show that the baseline network is subject to a number of operational problems by 2026, especially in the more critical PM peak period, with some further deterioration as a result of PC50. The ITA is rather vague on the forecast change in conditions, concluding this is not significant despite greater lengths of the state highway (Stanley Street and Frankton Road) being subject to lower levels of service.

47 The Inner Links proposal was developed specifically to address forecast operational problems with the road network within the inner urban area. Without any certainty that this project will now proceed, it is unsurprising that modelling identifies problems without this additional capacity.

48 In this regard, a paper prepared by Council officers and presented to the Planning & Infrastructure Committee in June 2014 used the same model to assess a 2026 scenario without the road building or travel demand management measures. The paper described the results as: *'these show the deteriorating traffic conditions on Frankton Road / Stanley Street, with more extensive sections of LoS D. The deterioration in traffic conditions on Man Street is largely linked to the growing traffic demands in that area (convention*

centre, expansion of town centre).'[5] The plot to which these comments relate actually shows significant road sections operating at LoS E.

49 Not only is this based on a potentially understated development scenario for the town centre, but it indicates strongly that the avoidance of future problems is reliant upon diverting some 20% of travel demand to other modes of travel.

50 For the reasons I have given above, I consider the achievement of travel behaviour change on this scale to be optimistic.

Parking

51 I agree with the general philosophy regarding parking provision, as described in Section 6 of the ITA. Specifically, I agree that unconstrained parking provision would not be appropriate in a town centre area where parking is a shared resource and people would generally not expect to park at their destination. I also agree that activities such as the convention centre and residential accommodation should provide on-site parking, with other activities not being required to provide any minimum level of parking.

52 But this does not mean that these other activities will not generate a demand for parking, and the demands placed upon the 'pool' of shared parking in the town centre area will be increased.

53 There appears to be some acknowledgement of this at Section 6.3 of the ITA, which states that:

> *'it is anticipated that there will be a defined and strategic need to share the supply of parking spaces to meet this demand across the site, the surrounding sections of kerbside parking within public streets and nearly parking facilities (e.g. Man Street car park) as well as the active promotion of alternative travel modes and dedicated visitor accommodation close to the Lakeview site to reduce and manage the demand for car-based travel'.*

54 However, there is no indication of the ability of the shared parking resource to absorb this additional demand, because no assessments have been made of the existing situation with regard to the supply of and demand for such parking in this area.

[5] *QLDC Report for Agenda Item 6 to Planning and Infrastructure Committee. June 2014.*

55 Rather than identify the need for any additional shared parking provision, the approach instead appears to rely on a shortfall of parking spaces (possibly in conjunction with pricing) as an incentive for the uptake of other modes of travel. While this might encourage some people to change their travel behaviour, there is a real risk that the outcome will be detrimental to the intended outcomes of PC50, for the reasons I have described above.

56 In my view, such a significant expansion of the town centre area should be preceded by a clear understanding of the underlying situation regarding parking demand and supply.

CONCLUSIONS

57 The pattern of development enabled by PC50 represents a significant expansion of the town centre area. An expansion on this scale has a potential to significantly increase travel demand, especially traffic volumes, and overall levels of demand for parking.

58 The assessments which have been undertaken are reliant upon a range of critical assumptions which are unclear and which have not been subject to either sensitivity testing or peer review. This means that the validity of the conclusions reached cannot be ascertained.

59 In particular, there has been no recognition that other credible development scenarios exist for which the generation of traffic activity and parking demand associated with the expanded town centre will be greater than assessed.

60 The accommodation of the additional travel demands arising from development enabled by PC50 is reliant upon a very significant shift in travel behaviour away from private car use.

61 The measures to achieve this critical shift are yet to be defined, being the subject of a town centre transportation strategy which does not yet exist. This will not appear in draft form until February 2015 and is then subject to a consultative process and adoption by the Council. Even then, as experience with previous strategies has shown, the desired outcomes may be largely aspirational and not achievable in practice.

62 Similarly, PC50 relies upon a general shortage of parking to encourage some mode shift. This approach has not been informed by a parking strategy or any assessment of current parking supply and demand.

63 In summary, it is vital not only that a strategic framework for addressing the change in travel patterns and demands arising from PC50 is in place, but that it is demonstrably effective in securing changes in travel behaviour.

64 Without this, planning for the town centre will become reactive rather than proactive, with a very real likelihood that adverse effects associated with congestion and a lack of parking availability will run contrary to the intended objectives of PC50 to secure an attractive and vibrant town centre.

Tim Kelly

November 2014