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Dear Duncan

North Three Parks Proposed Plan Change: Response to MWH Peer Review

Further to our recent e-mails and discussions, we are now able to respond to the peer review of our Transportation Assessment Report carried out by MWH on behalf of Queenstown Lakes District Council (dated 15 November 2011).

At the outset, we note that many of the matters raised relate to the potential effects of the proposed plan change on the transportation networks external to the site. In accordance with our conversation, in our response we have sought to be consistent with the scope and extent of analysis that was presented for the (now adopted) Three Parks plan change (TPZ, PC16) which is adjacent to North Three Parks and is much larger in size. As such, we have focussed wholly upon the internal transportation networks within the site.

1. Section 3.5 – Road Safety: Further Details of Crashes

While this information has not been presented within a Figure in the report, the text describes the common locations and factors, and includes an assessment of the observed and expected accident rates at one particular key location. Accordingly, we consider that sufficient analysis has been undertaken and presented to show that the proposed plan change will not adversely affect road safety within the immediate area.

We note that this level of detail is greater than was sought for the TPZ where the existing roading network was considered to be outside of the scope of the study.

2. Section 6.2.1 – Three Parks Zone (PC16): Justification for the 20% traffic volume reduction factor

The TPZ TIA includes an independent calculation of the expected traffic generation of the zone using rates from Table 6.1 from Transfund 209 (Trips and Parking Relating to Land Use Volume 1) but this is noted to be 10% higher than the traffic volumes which were forecast by the Wanaka Transportation Model. No reason is given for this discrepancy but in our view, this is because the calculation of traffic generation using Transfund 209 relates to the total traffic generation of individual sites within the zone with no allowance made for trips that are made wholly internal to the zone and which therefore do not appear on the external roading networks. Conversely, by its nature, the Wanaka Transportation Model will have taken internal movements into account and the reported traffic generation figure is that which the model expects will appear on the external network.



The percentage of internal movements within a site can vary on a case-by-case basis. However in our view a 10% difference is extremely conservative for a large site such as the TPZ and especially as there is significant potential for internal trips due to the synergy between the different land uses. The most recent example of a comparable land use is at Frankton Flats (PC19) where the Council has supported a reduction of 20% to take account of internal trips. We consider it is therefore appropriate to adopt the same value in this case also.

3. Section 6.2.3 – Future Year Traffic Generation: Further details on why some traffic generation has been reduced but not others

By way of background, the TPZ TIA indicates that the future external traffic generation of the area would be about 22,900 vehicle movements per day (vpd), as forecast from the Wanaka Transportation Model. We converted this to an estimate of the morning and evening peak hour traffic generation using observed peak hour factors from SH84 (Table 3 of our report). The external traffic generation of the BMUZ is contained within the PC32 TIA.

One particular issue with the TPZ and BMUG is that the two plan changes were advanced separately and do not necessarily take account of each other despite connections between the zones seeming to be envisaged in the relevant structure plans. Accordingly, we applied a reduction factor of 20% to the BMUZ external traffic generation because based on our review, there had been no account taken within the BMUZ of travel to the TPZ.

When we reviewed the TPZ analysis however, the generalized nature of the reporting meant that while we could see that there had been a reduction for internal trips, we could not identify whether this reduction was for trips wholly within the TPZ or whether a proportion took account of travel to BMUZ. We therefore decided to adopt a cautious approach and assume that there had been a reduction for travel to BMUZ, and we therefore did not make any further reduction.

4. Section 6.2.4 – Proposed Plan Change Area: Further details on the reduction factor

As noted earlier, QLDC has supported a reduction factor of 20% being applied to the “at the gate” traffic generation rates in their estimates of the total external traffic for the large mixed used development proposed under PC19.

5. Section 6.3 – Traffic Distribution

Since the TAR was issued, we have collected traffic survey data in the Queenstown area that indicates that the factor of 3.7 that we previously used (which was taken from ITE references and used to estimate the evening peak retail component of the TPZ traffic generation) is too high. Our survey data suggests that retail-related traffic generation in the evening peak hour is likely to be 2.0 to 2.5 times the traffic generation during the morning commuter peak period of 8:00am to 9:00am. On this basis, the retail traffic generation in the evening peak would be expected to be in the range 1,100-1,600 vehicles per hour (vph).

The evening peak hour traffic generation of the TPZ was estimated on the basis of the SH84 peak hour factors, although we noted that the observed factor of 9.6% was below the range of 10% to 15% that would normally be anticipated. However, if a peak hour factor of 11% was adopted, the evening peak hour external traffic generation of the TPZ would be about 2,500vph with the retail component accounting for about 1,300vph and this would be consistent with the Queenstown survey data.



An updated version of Table 8 of our report is shown below with the reduced retail traffic generation. This demonstrates that this has no effect on the expected directional movement pattern compared with that which was reported in the TAR.

Zone	Activity	Vehicle movements	In / Out	Inbound	Outbound
Three Parks	Residential	760	65% / 35%	494	266
	Mixed-Use	90	30% / 70%	27	63
	Retail	1,300	50% / 50%	650	650
	Business	350	15% / 85%	53	297
Proposed Plan Change	Residential	440	65% / 35%	286	154
	Business	60	15% / 85%	9	51
	Total	3,630		1,519	1,481
				51%	49%

Table 1: Directional Movement Pattern – Evening Peak Hour

Please note that the internal trip reduction factor has not been applied to this calculation because it is the percentage figures that are the critical aspect rather than the absolute values of vehicle movements.

6. Section 7.1.2 – SH84: Level of service

The matters raised in this part of the peer review relate to the external roading network and are therefore beyond the scope of this response. We note however that the calculations of Level of Service are complex and require the use of spreadsheet, and therefore cannot easily be replicated within a written report.

7. Section 7.1.3 – State Highway 84 / TPZ Main Road: Traffic modeling

The matters raised within this part of the peer review relate to the external roading network and are therefore beyond the scope of this response.

8. Section 7.1.4 – Ballantyne Road: Traffic modelling

The matters raised within this part of the peer review relate to the external roading network and are therefore beyond the scope of this response.

9. Section 7.1.5 – Riverbank Road: Use of the road by development traffic

The matters raised within this part of the peer review relate to the external roading network and are therefore beyond the scope of this response.

10. Section 7.2 – Walking and Cycling: Identification of corridors

It is envisaged that principles of new urbanism will be applied within the plan change area such that low vehicle speeds will be encouraged. The plan change area will be developed predominantly for residential use and the total daily peak hour traffic generation is expected to be 4,400-5,000vpd based on a traffic generation rate of 8-10vpd per dwelling. This traffic will be distributed across the internal road network and daily traffic volumes on individual



roads are generally expected to be below 2,000vpd. Because of the low volume of traffic, there would be no need to provide specific cycle facilities on these roads.

The proposed internal road network includes one 'through' route that connects Ballantyne Road with the TPZ spine road. With the higher traffic volumes expected on this road, it is envisaged that a road cross-section would be adopted that included cycle lanes.

We understand that in addition to footpaths on both sides of all roads, pedestrian links will be provided through larger blocks to improve the pedestrian network connectivity. We also understand that a walking / cycling trail will be constructed along the southern boundary of the golf course, which will provide a dedicated route for those wishing to walk or cycle between Ballantyne Road and south/west areas of Wanaka to the Mt Iron Reserve.

We note that the pedestrian, cycle and public transport connections with the wider transport network will be designed to integrate with the corresponding network for the TPZ. We understand that the latter is not currently available.

11. Section 8.3 – Regional Land Transport Strategy: Updated version available

The Otago Regional Land Transport Strategy 2011-2041 sets the direction for Otago's land transport system for the next thirty years and replaces the 2005 strategy. The new strategy takes account of changes in the way the Government prioritises its transport investment to focus on supporting national economic growth and productivity.

The goal of the strategy is a *“safe transport system that provides connections between communities, leading to regional prosperity, the creation of wealth and employment, social inclusion and the minimisation of adverse environmental effects.”*

Two transport outcomes have been identified as important for reaching this goal.

- *Sustainable, demographically appropriate transport infrastructure and services that serves and links resilient communities.*
- *The ability of individuals, families, households and businesses to undertake necessary travel and carriage of freight in safe, healthy, convenient and affordable ways, with travel constrained only the choices people make (i.e. the realities of residential and business locations).*

The strategy defines the essential requirements for a sustainable transport system as:

- *be affordable to operate, maintain and use over the long term;*
- *persist in the face of external shocks and natural hazards;*
- *deliver the level and quality of service expected, safety included, to enable travel/freight, and*
- *keep social and environmental impacts within acceptable levels.*

In order to improve accessibility, the strategy aims to ensure adequate access to goods and services can be maintained at all times while addressing the issues of:

- *rising maintenance and operation costs and an expanding transport network, and*
- *a likely shortage of affordable transport fuels from time to time.*

The specific policy goals to address these issues in urban areas are:



- *Supporting the movement of people and freight in urban areas;*
- *Choice of travel modes, with easy connections between modes in urban areas;*
- *Acceptable, predictable travel times for routine journeys, including commuting in urban areas;*
- *Urban community and economic well-being;*
- *Social participation and inclusion in urban areas.*

Progress against the policy goals will be monitored using a series of indicators for specific outputs.

The residential development of the plan change area (and adjacent TPZ) will contribute to the growth of the central Wanaka area and it is envisaged that the population density will become sufficient to make public transport services sustainable. The proximity of the Plan Change area to the existing developed areas of Wanaka and also the retail and other facilities provided within the TPZ will ensure that other sustainable transport modes (walking and cycling) are viable for existing community facilities, schools and recreational activities.

We consider therefore that the development of the North Three Parks plan change area will contribute to achieving the outcomes of the strategy.

12. Other Matters

We agree that further information will be required in due course concerning the performance of internal intersections, and that the careful consideration will be required to ensure cohesion between the TPZ and North Three Parks. We also agree that these matters will be required in a subsequent stage of the analysis.

I trust that the above is of assistance but please do not hesitate to contact me if you require anything further.

Yours faithfully
Traffic Design Group Ltd

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