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28 July 2023

Enquiries: Andrew Leckie
Project No: 310205844

QCP Limited
c/o Davis Ogilvie

Attention: Penny Gallagher

Dear Penny

RE: Lake Tekapo Tree Climb
Transport Assessment

1. Introduction

QCP Limited proposes to develop a commercial tree climbing operation in the trees on Lakeside Drive, Lake Tekapo, opposite the Lakes Edge Holiday Park. The proposal would involve construction of a small base station which customers would report to on arrival and then a range of activities in the surrounding trees. It is understood that the proposal is a discretionary activity under the Mackenzie District Plan and Stantec has been asked to provide a transport assessment for the consent application. The assessment is outlined in this letter.

2. Site Location

Figure 1 shows the location of the site in the context of the Lake Tekapo township.

Figure 1: Site Location in Context of Lake Tekapo

The site is on Lakeside Drive, which provides access to the Tekapo Springs tourism activities as well as the Lakes Edge Holiday Park, a developing residential subdivision (Station Bay subdivision) and the lakefront.

Figure 2 shows the indicative location of the proposed tree climbing base station. It will be located south of the Power Boat & Water Ski Club and the boat ramp access, and opposite the Holiday Park.

Figure 2: Location of Proposed Base Station in Local Context

3. Existing Transport Environment

3.1 Lakeside Drive Formation

Lakeside Drive past the site has a sealed carriageway suitable for two-way vehicle movements at slow speeds. Photographs 1 and 2 show the road in front of where the tree climbing operation is proposed. On the lake-side of the road, there is a wide gravel area which is used for informal car parking. As highlighted in Figure 2, this area has a length of approximately 130m (capacity for approximately 45 vehicles parked at 2.8m spacings), from the boat ramp access to opposite the Station Bay Rise intersection where stormwater and landscaping treatment has been carried

out. There are no kerbs along this section of the road and there is unrestricted access to the parking area. Other areas nearby can also be used for informal parking, e.g. the area opposite the site visible in Photograph 1.

Photograph 1: Lakeside Drive Approximately at Proposed Base Station Location, Looking North

Photograph 2: Lakeside Drive Approximately 100m South of Proposed Base Station Location, Looking North

3.2 Lakeside Path

A concrete path, suitable for use by pedestrians and cyclists, has been constructed from the Lake Tekapo township along the lakeside, linking to the Tekapo Springs tourism activities to the north. Photograph 3 shows the path close to the location of the proposed base station.

Photograph 3: Lakeside Path

3.3 Lakeside Drive Traffic Volumes

Fulton Hogan, being the Council's roading contractor, has advised that daily traffic volumes during the peak summer season on Lakeside Drive (recorded in the January – February period in 2019 and 2022) are up to approximately 2,500 vehicles per day (vpd). Through the middle of the year traffic volumes are more typically 600-700vpd.

3.4 SH8 / Lakeside Drive Intersection

Lakeside Drive meets State Highway 8 (SH8) at a Stop-controlled T-intersection approximately 1km south-east of the site. This intersection has recently been upgraded to include a right turn bay on SH8 to cater to increasing activity along Lakeside Drive.

3.5 Existing Road Safety

A crash search has been carried out using Waka Kotahi's Crash Analysis System. One crash was reported at the SH8 / Lakeside Drive intersection during the most-recent five-year period of 2018-2022. This was a non-injury, rear end collision in 2019, prior to the right turn bay being installed.

No crashes were reported along Lakeside Drive.

This crash search does not reveal any safety concerns with the existing infrastructure.

4. Future Environment

Further development is consented along Lakeside Drive.

The Station Bay subdivision construction is underway and land is zoned for future stages. The Integrated Transport Assessment for the original rezoning, dated 2015, outlined that approximately 160 residential lots could be developed in addition to the camping ground, and they could generate up to approximately 1,300 vehicle movements per day (vpd) during the summer peak period.

A hotel has also been consented on Lakeside Drive, at its eastern end closest to the township. Transport evidence for the consent hearing in 2017 outlined that it could generate approximately 840vpd.

5. Proposed Development

A base station is proposed on the lake side of the path, as indicated below. The various other structures associated with the tree climb operation will be within the trees in the area.

Figure 3: Proposed Tree Climb Operation

At peak times of the year, there could be four or five staff employed and a maximum of 60 users at any time.

The base station will be accessed from the path, as indicated above. 12 cycle parking spaces for staff and customers are proposed at the base station in the form of cycle rails.

One accessible parking space will be signposted close to the base station. No other changes to Lakeside Drive or the existing informal parking area in front of the base station are proposed.

6. Traffic Generation and Parking Demand

The site is within walking distance of much of Lake Tekapo township and within an easy cycling distance of the whole township. Also, the lakeside path running between the township and Tekapo Springs makes the site very accessible by walking and cycling. Furthermore, the busiest days at the tree climbing operation will be fine weather days. Accordingly, it can be expected that a significant proportion of visitors to the site could arrive via active travel modes. For this assessment, it has been assumed that 30% of people could arrive by walking or cycling.

It is expected that this type of activity will attract families and other groups of people, including potentially organised groups in vans or other larger means of transport, resulting in relatively high vehicle occupancy rates. It is considered that an average vehicle occupancy of three passengers per vehicle is conservatively low for such an activity.

If there are 60 people visiting the attraction, with 70% arriving by vehicle and three people per vehicle, there could be car parking demand for approximately 10-15 vehicles. It is noted that the District Plan car parking requirement for a

recreational activity is one space per four people that the activity can accommodate, which would equate to 15 spaces, so the car parking demand estimate is likely in the right order.

If people stay for approximately an hour, there could be 15 vehicles arrive and 15 vehicles leave in a busiest hour.

While the activity will have the capacity for 60 users at one time, it is not expected to have 60 users present throughout even the busiest of days. The applicant has advised that 250 users in a day could be expected on a busy day. Based on 30% active mode use, and three people per vehicle, this level of activity would represent approximately 60 vehicles arriving and 60 vehicles leaving across the day.

Given the location of the site (on the way to Tekapo Springs) and the low-key nature of the activity, it is expected a lot of people arriving by vehicle will have already been passing by i.e. on their way to or from Tekapo Springs, or either leaving or returning to the residential activity in the area. While these 'pass-by' vehicle movements will potentially contribute to increased numbers of vehicle movements into and out of the informal parking areas on Lakeside Drive, they will not add to traffic volumes on the south-eastern section of Lakeside Drive, including at the SH8 / Lakeside Drive intersection. If 50% of vehicle movements are pass-by movements, the activity could add up to approximately 15 vehicle movements per hour (two-way) and 60 vehicle movements per day to the SH8 / Lakeside Drive intersection.

7. Assessment of Effects

7.1 Effects on Lakeside Drive

Vehicle speeds along Lakeside Drive are generally slow, due to the narrow width of the carriageway and the presence of traffic calming measures. The road has a reasonably straight alignment allowing good forward visibility for drivers. As is visible in the photographs presented earlier, the parking area along the front of the site is generally deep, allowing for reverse manoeuvring to occur clear of the Lakeside Drive carriageway. The informal car parking areas along Lakeside Drive are already used for car parking during busy times and drivers needing to be aware of vehicles manoeuvring is part of the existing environment.

As outlined, the increased number of vehicle manoeuvres to and from the Lakeside Drive car parking areas resulting from the proposed activity is expected to be small (up to 30 vehicle movements per hour or 120 vehicle movements per day adopted for assessment). 30 vehicle movements per hour equates to one additional vehicle movement either to or from one of the parking areas every two minutes on average. It is considered that at the busiest times on Lakeside Drive, this level of increase in vehicle manoeuvring activity will not be perceptible.

Similarly, an increased parking demand of 10-15 vehicles at the busiest times on Lakeside Drive is considered negligible when considering the available car parking supply and existing levels of activity.

7.2 Wider Effects

Allowing for pass-by traffic movements (which do not add to traffic volumes on Lakeside Drive south-east of the site or at the SH8 / Lakeside Drive intersection), the increase in use of Lakeside Drive south-east of the site and the SH8 / Lakeside Drive intersection generated by the proposed activity will be small. An additional approximately 60 vehicle movements per day is very small in the context of the existing traffic volumes on Lakeside Drive (up to 2,500vpd) and future consented activities (expected to be 1,300vpd for residential activity and 840vpd for hotel). It is noted that the development of these activities will increase the number of residents and visitors within easy walking distance of the proposed tree climb activity, likely contributing to a higher active mode usage by users. Recent improvements have been made to Lakeside Drive and the SH8 / Lakeside Drive intersection to cater for traffic growth on Lakeside Drive and the small potential increase in use of the road as a result of the proposed activity will have a negligible effect on the safe and efficient operation of the road.

8. District Plan Compliance

The Mackenzie District Plan Section 15 Transportation Section 2 Standards have been reviewed for compliance. Relevant standards are commented on below.

8.1 Car Parking Provision

Under Standard 2a, recreational facilities require a minimum of one car parking space per four persons designed to be accommodated. For a maximum of 60 users, 15 parking spaces would be required. No specific car parking for the activity is being provided since the activity is within a public space and there is abundant informal car parking along Lakeside Drive in the vicinity. It has been assessed that the proposed activity could generate a parking demand for 10-15 spaces at the busiest times and as outlined, this is considered negligible given the available car parking supply and the existing activities in the vicinity.

Standard 2d requires one space for people with disability for 10 to 50 parking spaces. Furthermore, the space shall be located as close as practicable to the building entrance, on a level surface and clearly signed. It is proposed to sign one accessible space in front of the base station. It will be ensured that the ground is reasonably level where the space is to be located, while remaining unsealed as it currently is. It is assessed that compliance with this standard is achieved, while noting that the nature of the activity is focussed on able-bodied people and not suitable for all levels of physical disability.

As no car parking is being provided specifically for the activity, it is assessed that other rules relating to matters such as manoeuvring and queuing space are not relevant. Similarly, there are no vehicle crossings to private property proposed and rules relating to vehicle crossings and access are not considered relevant.

8.2 Loading

Standard 2i requires a 6m long, 3m wide and 2.6m high loading space for offices and other non-goods handling activities, where the gross floor area is less than 500m^2 and where on street parking is available for occasional servicing by larger vehicles.

No loading space is proposed. Delivery vehicles are expected to be infrequent and small in size, if required at all (could possibly be a small drinks fridge or similar which needs to be re-stocked). Any small and infrequent delivery vehicles will be able to use the informal parking area in front of the base station and it is considered that any associated manoeuvring will have a negligible effect on the safe and efficient operation of Lakeside Drive.

9. Conclusion

It is concluded that the proposed tree climbing activity is well located to attract customers by active travel modes. It is expected to generate low volumes of traffic, and much of this traffic would be expected to be pass-by traffic already on Lakeside Drive. Accordingly, it will have a negligible effect on the safety and efficiency of Lakeside Drive south-east of the site and the SH8 / Lakeside Drive intersection. Locally, the activity will result in an increase in the number of vehicle manoeuvres and car parking demand along Lakeside Drive. However, it has been assessed that the additional manoeuvring will occur safely with negligible effects on the operation of Lakeside Drive and the increase in car parking demand will be negligible in the local context.

Please do not hesitate to contact the undersigned if you have any queries.

Yours sincerely

Stantec New Zealand

Andrew Leckie
Senior Transportation Engineer