Maxwell Place & Panorama Terrace Intersection – Tree Safety Assessment

Queenstown Lakes District Council, Parks Division, requested that Opus International Consultants complete a safety assessment of the trees near the intersection of Panorama Terrace and Maxwell Place.

A site visit was completed on 15 March 2017.

Location & Environment

The intersection is located in a hillside residential area. The posted speed limit is 50km/hr. Panorama Terrace is a residential road providing access to many private properties, while Maxwell Place is a cul-d-sac, also providing access to further private properties. The intersection between these two roads is an angled "T" intersection, the layout of which is displayed in figure 1. There are two large poplar trees inside the acute angle created by this intersection, as shown in figure 2.

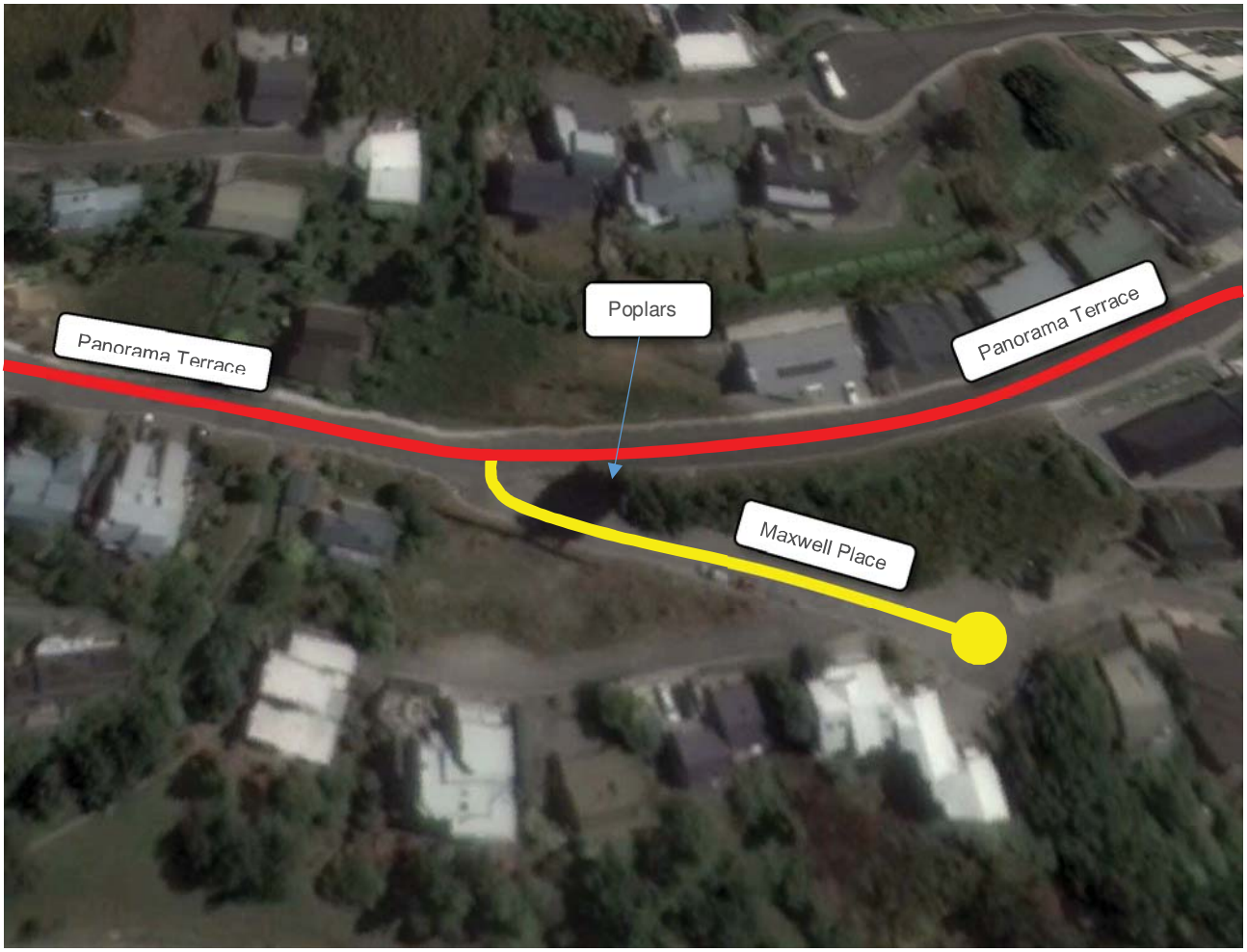

Figure 1: Panorama Terrace & Maxwell Place intersection

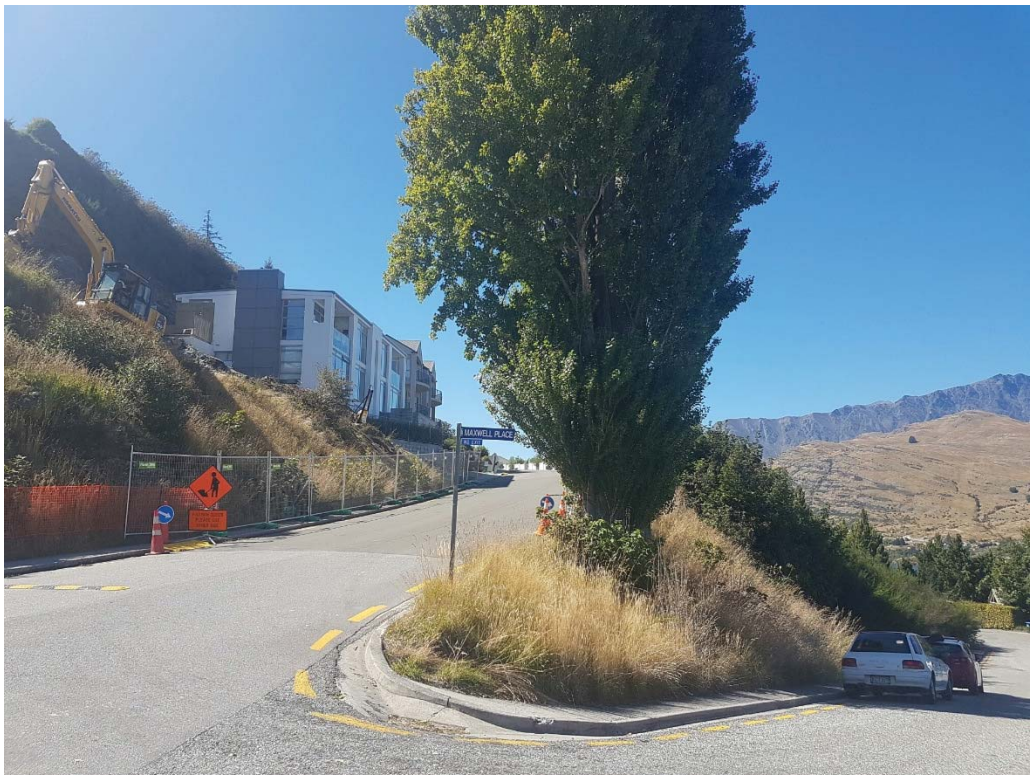

Figure 2: Trees inside corner of intersection

Identified Issues

The trees currently pose a safety hazard by restricting sight lines at the intersection. In particular vehicles exiting Maxwell Place have poor sight distance to their right due to the trees blocking vision. This is of particular concern to cyclists as their smaller width and positioning on the road is likely to further reduce sight distance. Figure 2 shows the affected sightline, while Figure 3 shows the reverse angle.

Figure 3: Trees impeding vision of intersection

The trees also provide a roadside hazard to users of Panorama Terrace. With no protection in front of these, vehicles striking the tress could potentially result in serious death or injury.

During the winter period, temperatures often reach below freezing. The shade created by the trees, figure 4, is likely to result in a dangerous icy surface near the intersection and partway down Maxwell Place as the sun cannot effectively warm the road surface.

Figure 4: Shaded area on Maxwell Place

Figure 5 shows the concrete crib wall that is currently retaining the pavement shoulder of Panorama Terrace. While the trees have already undermined the existing wall in sections, the continued growth of the trees within the retaining wall is likely to damage the structure of the wall further.

There have been cases in Queenstown where Poplars have fallen over and the resulting root mass that is dislodged is substantial, thus potential damage to the carriageway and retaining wall could be significant.

Figure 5: Retaining wall near trees, supporting Panorama Terrace

Recommendations

It is recommended to remove both trees from the road reserve. The removal of the trees would be beneficial to user safety by improving sight distances, reducing the chance of icy surfaces, and removing the possibility of collision with the trees.

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