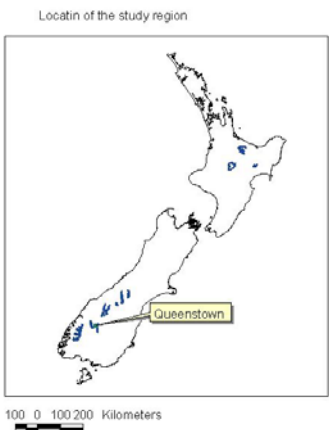
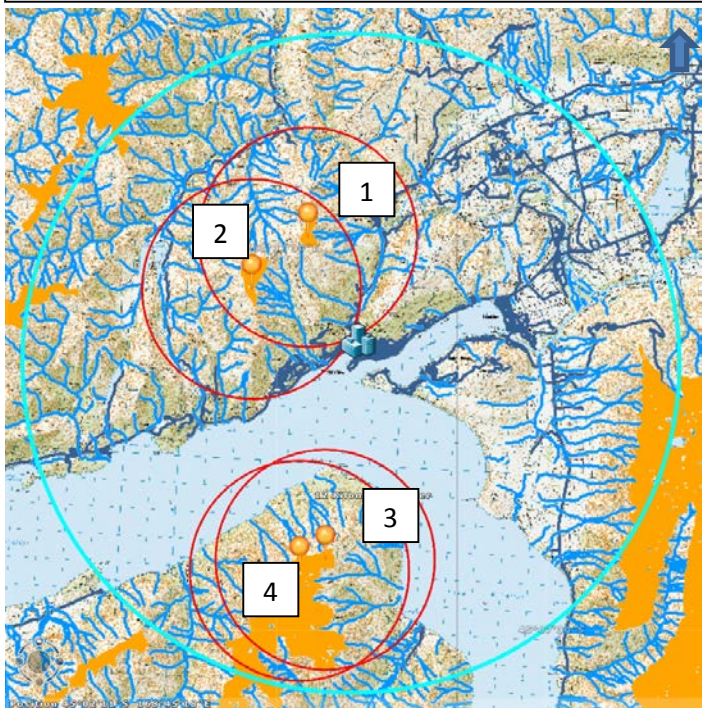


Layout for Queenstown – The problem is where to put the best cell phone tower?

Student 4-High Achieved

Map showing the 4 possible sites for a cell phone tower



A graph and a second Google image completed the layout

Screenshot to show the best site



Key

Land over 1500 m asl	
Rivers	
Buffers	

1=Bowen peak 3=Island Spur
 2=Ben Lomond 4=Garden Spur

1

Student 4-High Achieved

Finding the best site – Cell phone towers

My Recommendation

Site No	Site Name	Position	Elevation (m)	Distance To Queenstown (m)	Nearest Highway (m)	Slope
1	Bowen Peak	44°59'S, 168°38'E	1631	4286	2869	Top of Mountain
2	Ben Lomond	45°00'S, 168°36'E	1580	4304	2905	Flat slope between contours
3	Island spur	44°59'S, 168°38'E	1670	11586	8607	Flat on top of spur
4	Garden Spur	45°00'S, 168°36'E	1800	11592	9879	Area of flat land

All of the 4 sites are in the 12km buffer zone of Queenstown and all meet the elevation requirements...

The site that I recommend for the location of a cell phone tower is Site 1. It is closest to Queenstown and closest to a major road, see map (2)... Site 2 is also quite close, but it is the lowest site, only 1500masl and this could affect reception quality for some parts of Queenstown such as ...

The two sites to the south of Queenstown are less accessible... Site 3 could give very good reception because of uninterrupted view to the CBD, and it is similar in elevation to Site 1, but it is across the lake and there is only one unsealed road (3)...

These two sites have advantages of large relatively flat platforms for building, but the disadvantage of Garden Spur the 4th site is its altitude...

The access and low cost of construction are in favour of Site 1. It has a good view of Queenstown and the surrounding area, see Google Earth image. This site would offer the best cell phone coverage (4).