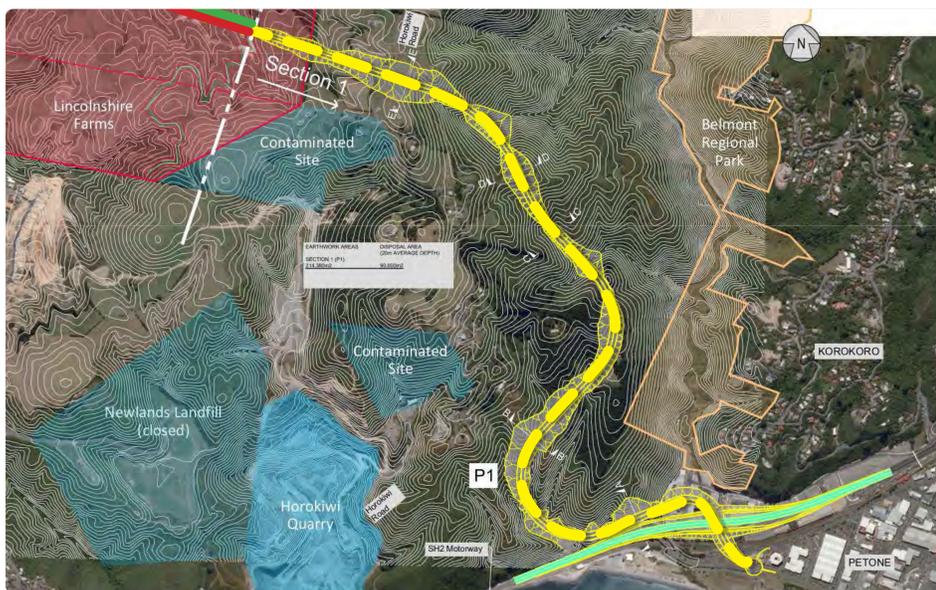


## Petone to the Crest - Discarded options

For the southern section of the Link Road, the team originally considered three options between Petone and the crest of the Wellington Escarpment. These three options did not deliver the best results so the team considered a fourth option. The main difference between the four options is the routes they follow going over the steep hill slopes from Petone to the hilltops of Lincolnshire Farm. The main similarity is that they all require soil and rock to be cut from the hillside to create a new road. Several challenges were found with options 1, 2 and 3 leading to them being discounted. These are outlined below.

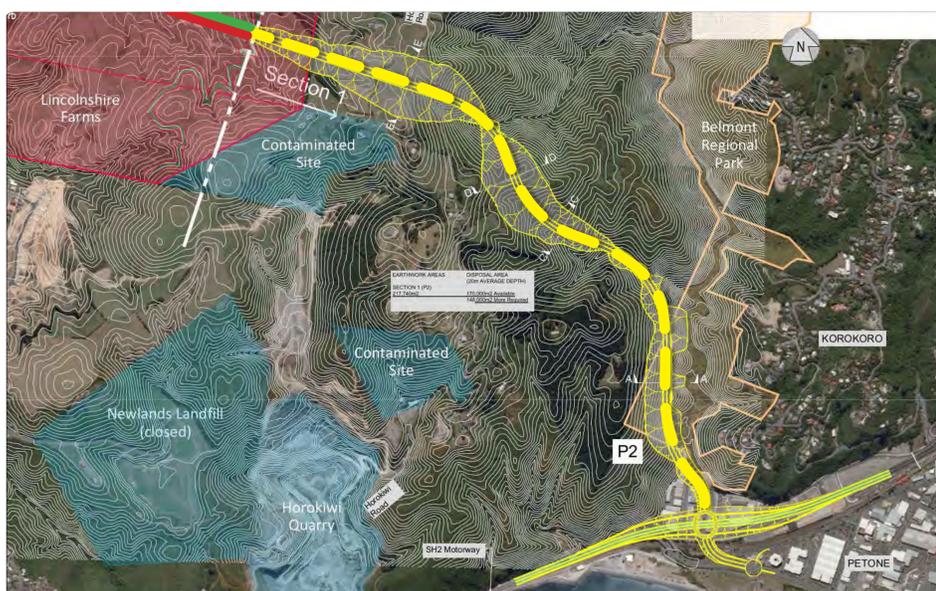


### Option 1

This route would be very visible to people travelling on the highway and on trains as well as from within Belmont Regional Park. The cuts to create the road would also result in an extensive number of bare areas.

There were further concerns about this route's ability to withstand a large earthquake as it travels along the coastal escarpment, which is located directly above a fault line. In the event of a large earthquake the Link Road and SH2 could both be compromised, closing this half of the Link Road and the Petone Interchange for months.

**Option 1:** From the proposed Petone interchange, this option climbs to the west and travels along the face of the coastal escarpment before curving to the northeast and running along the west of the ridgeline. From here the route swings back to the northwest and crosses Horokiwi Road before linking up with the eastern section of Lincolnshire Farm. The gradients of the steep sections range between 6 and 9% and the largest cuts into the hillside are up to approximately 60m high.

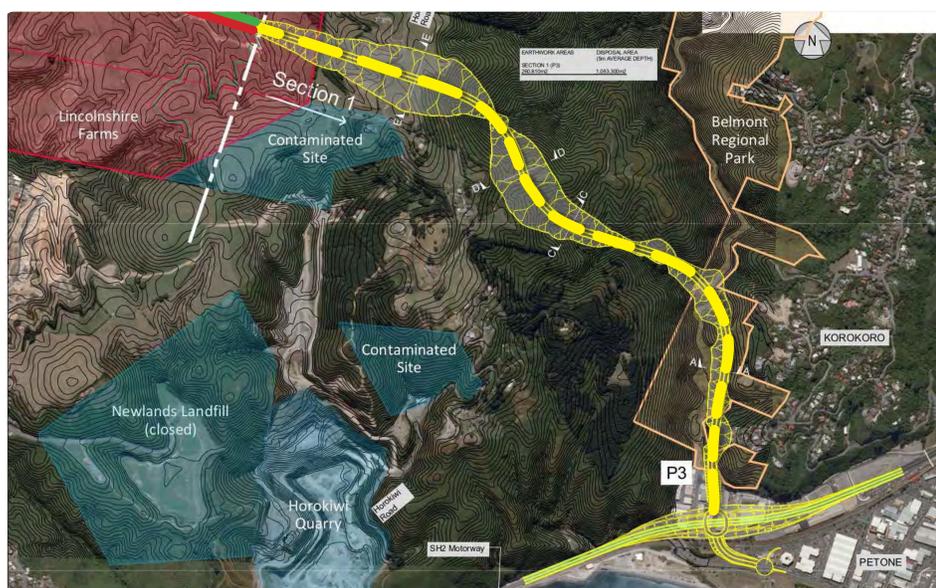


### Option 2

This route would also create visual impacts, but they were contained within the valley. Its biggest impact would be it directly encroaching on Belmont Regional Park and the Korokoro Stream.

Other concerns were also raised with this route. Travelling along the Korokoro Stream makes it vulnerable to earthquakes while storms could close the route for weeks.

**Option 2:** From the proposed Petone interchange, this route climbs to the north and travels along a section of the Korokoro Stream. It then continues northwest. This route is shorter in comparison to Option 1, but is steeper as a result. Its gradient is still within 6 - 9%. The largest cuts are near Horokiwi Road and are up to roughly 100m in height.



### Option 3

This route also encroaches on Belmont Regional Park, creating significant impacts on users. It would also affect Korokoro Stream, requiring an extra stream crossing.

Although it is located further away from the Wellington fault zone, in the event of an earthquake or storm it could still require weeks to clear the route and provide access.

**Option 3:** From the proposed Petone interchange, this route climbs to the north on a parallel embankment east of the Korokoro Stream. From this point the route climbs the eastern side of the Korokoro Valley within Belmont Regional Park. It then deviates northwest across the Korokoro Stream. The route climbs a branch of the Korokoro Stream before reaching the eastern hilltops of Lincolnshire Farm. The gradient starts at approximately 6% rising to 9% with cuts of up to roughly 100m near Horokiwi Road.