

Tauranga District Council
Private bag 12022
Tauranga

5 December 2019
Avalon Project #20149

For the attention of [REDACTED]

Dear [REDACTED]

Mauao Slopes; Monitoring Report for December 2019

The six monthly rock bluff survey benchmark monitoring and site geotechnical walkover was carried out on the 3rd and 4th December, in conjunction with rock scaling and weed spraying of an ongoing scouring slip face above the western base track.

1. Rockfall since previous monitoring

There has been no rockfall reported to the ranger's office since the previous monitoring in May. The walkover did not find any indications of recent rockfall.

2. Vegetation/other changes noted since previous monitoring

2.1 Non native tree removal has been completed on lower slopes above the campground.



Photo 1. Tree felling completed.

2.2 Erosion control planting on slip scars

Recent erosion control planting was noted to small slip scars on the lower slopes above the base track and in the vicinity of the campground. This should be effective in helping stabilise the slip surfaces.



Photo 2. Recent erosion control planting.



Photo 3. Recent erosion control planting.

2.3 Link track from eastern oruahine to base track.

The steps have been reconstructed and the track has been reopened.

3. Scaling of the active slips above the mid western Base track

These slips continue to actively erode and scour results in exposure of new surface rocks. The minimum recommended hazard management measure would be to scale the surface every two or three years and/or following major storm events.



Photo 4. Scaling and weed spraying was completed on 3 December 2019.

4. Bluff survey

The benchmark survey found no significant movement on the high bluffs which are monitored.

5. Items reported previously

5.1 Loose rock identified on the bluffs above the Oruahine track.

In 2017 Avalon provided a team of two Technicians to assist with vegetation survey work above the Oruahine track. During that work the team came across a number of unstable areas of rock face.

Some larger unstable boulders were found, indicated in the following photos. These could not be scaled at the time with the resources available. We recommend these hazards be scaled. Track security would be required.



Photo 5 and 6. Loose rock identified on the bluffs above the Oruahine track.

5.2 Boulders on the slope surface above the southern base track

This location has been reported a number of times previously but has never been looked into in more detail. The slopes in this vicinity are heavily vegetated which tends to conceal the hazard. Many large rounded boulders are loosely embedded in the sandy soil which in places lies at a very steep slope angle.

We would recommend a rope access inspection to take a closer look. Some of the worst of these hazards could be scaled relatively easily.



Photo 7. Boulders on the slope surface above the southern base track

5.3 Options for improving sight line on the Waikorere track.



Photo 8. Sharp bend on the Waikorere track.

The drop off at this location is very steep and hazardous. The potential for joggers to collide is clear.

The rock corner could be reprofiled and cut back to improve the sight line. Signage and or a guardrail could also be considered.

5.4 Scoured condition of the Goat track

The steep Goat track connects the hairpin on the 4WD track with the south summit. The track is not visually obvious and is not officially open but it is used regularly by locals.

It becomes a surface water channel during heavy rainfall and is currently deeply scoured out.



Photo 9. Scour on Goat track.

6 Base track repair in progress

At the time of the walkover the major repair to the western base track was underway. The repair site was security fenced hence not visible and is outside the scope of this report.

If you have any queries please don't hesitate to contact me at any time and let us know if you would like us to go ahead with any of the options mentioned above.

Regards