



Avalon consulting

high / difficult access

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Tauranga District Council  
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23 March 2006  
Job No: 0620

For the attention of [redacted]  
Cc [redacted]

Dear [redacted]

### **Mauao Rockfall Hazards; 22 March 2006**

#### **Regarding yesterday's operations:**

Firstly, thanks for your help. There are certainly a couple of lessons I think we can learn to improve our management of these events in the future.

To summarise what I/Avalon should have done better:

1. I could have been clearer in my previous verbal recommendation that the far corner of the campground should not have been occupied and on the morning could have stopped the work pending this on the remote possibility (estimated as 1 in 300) that a rock could reach this level.
2. I could have more strongly suggested that, although considering previous data the probability was in my best judgement that the boulder would come to rest in the bush, there remained a possibility of it reaching lower paddock areas.
3. I could have spent more time with [redacted] and the security team, ensuring we all fully understood our roles.

From TDC's side of the operation, improvements might be:

4. As per my 3. Spend more time ensuring everyone in the security team fully understands their role.
5. Put the works on hold until all security staff are in place. I believe we were one person short.

As to whether full Mauao closures, walkovers, media exposure etc are warranted each time, I am still unsure. We are always going to have to strike a very difficult balance with work and access on Mauao and will always have to make judgment calls based on risk assessment and probabilities, rather than absolutes.

Regarding the two women on the stone steps at the time of the scaling; I think we should be careful not to over-dramatise this. Although the term 'near-miss' is often used to raise potential safety issues, I think it might be better to use the term 'incident' in this case, as near-miss conjures up visions of boulders flying past peoples heads, and this did not happen.

The rock did stop approximately 50m from them and was within the exclusion zone which was enforced by TDC.

A few comments on the nature of the rockfall:

The rock was initially 1m x 500mm. At first bounce it split into two pieces. One half came to rest just into the bush. The other half was a good disc shape and deflected off an initial Pohutakawa to track a line through bush with very few Pohutakawa trees.

This shape and track line improved its chances of travelling further than I had thought likely. These factors, if predicted beforehand, could have lead to tighter security on the lower paddocks.

There will always be a small probability of any rockfall reaching the sea or campground.

### **Some more information just given to me:**

This morning I was chatting with one of Avalon's new staff members who previously worked on Mauao for one of your weed spraying contractors.

We got onto talking about his experiences during the spraying and he told me they typically couldn't help causing maybe 5 or 6 rocks to fall during each rope 'drop'. This concurs with Avalon's experience that it is almost impossible not to cause rockfall when crossing the steep slopes off the track. He related one time when shouts were heard from below and rockfall had been near rock climbers who had ignored a track closure.

I enquired as to how effective their security was and learned that they were only using signage and barrier tape and that persons fairly frequently crossed the barriers and when challenged were of the opinion that 'this is their Mount and a contractor can't tell them where not to go!'

Avalon and TDC have, as you know, often experienced this type of reaction and it again illustrates the problems we all have in dealing with public and safety issues on Mauao.

If you require any further information please give me a call.

Yours faithfully,

s 7(2)(a) - Privacy

For Avalon Industrial Services