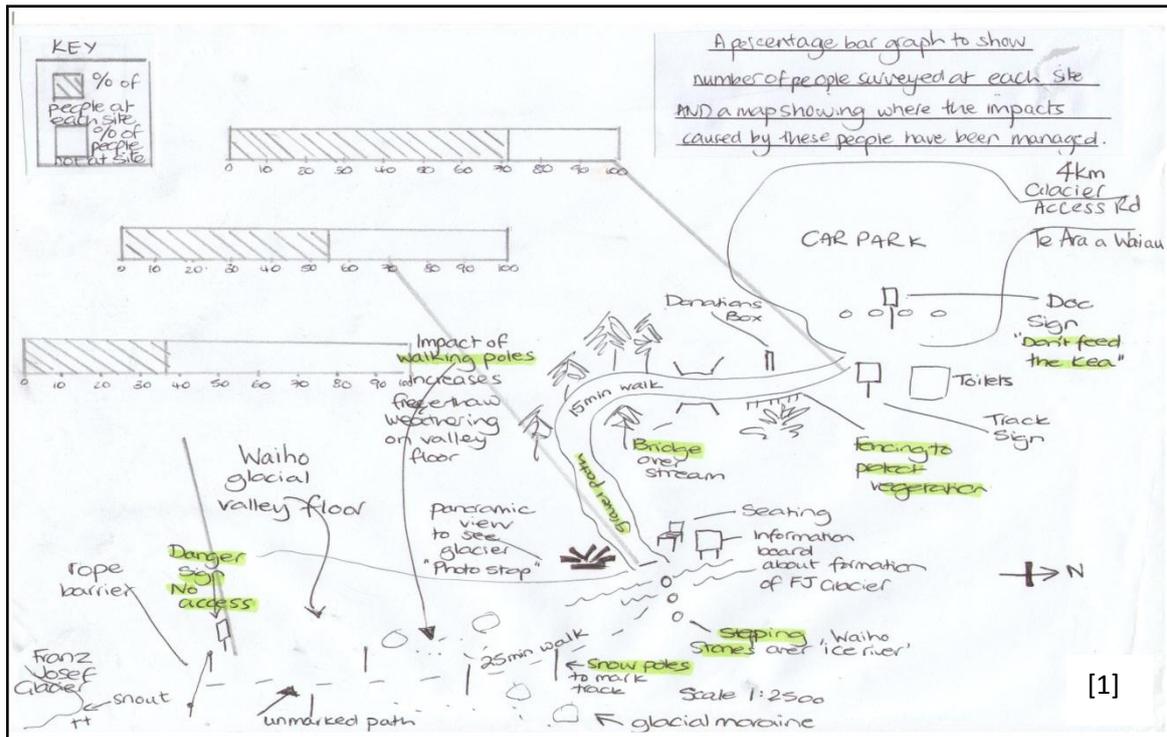


Student 1 - Low Excellence

The presented work also included two tables showing survey data and extra profiles and photographs.

**Aim:** To identify and assess the impact of people on the access route to the Franz Josef Glacier?

**Present data and description of findings**



**Photo 3**  
**Wide area of human impact beyond the track**  
 Walking spikes accelerate freeze thaw weathering on the valley floor  
 Trampling of soft glacial gravels

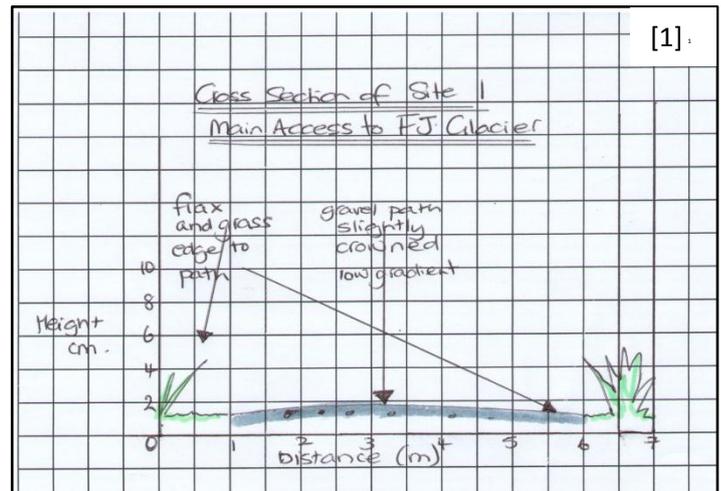
My findings show that the type and extent of impacts of people differ according to the distance from the car park to the roped off area before the Franz Josef Glacier. Franz Josef (Ka Roimata o Hine Hukatere) is one of New Zealand's most accessible glaciers. My map shows the car park, track and unmarked path with walking distances. The track is well maintained (see photo 2) providing easy access to the photo stop area. As the car park and track area are high impact zones DOC has provided sealed access which keeps people to a

defined area and reduces damage to bush around this area... [2] There is evidence where cars have parked on the edge of the road when the car park was full, causing erosion and damage to the drains, this is a negative impact... DOC says that over 250,000 people visited in 2010 and this number is increasing each year... The annotations show the extent of the changes made by DOC to manage and reduce the negative impact of visitors using tracks, rubbish bins, and signs etc. [3]

In the zone shown in photo 3, the track is marked part of the way by snow poles across the moraine, but people tend to wander all over the area at the snout of the glacier [5]. The glacier is roped off which reduces impact by people and can only be accessed by guided groups. This area is not accessed by so many people, only 35% of the total counted.

### Photo 2 and cross section

My cross section and photo 2 show that the path is 5 meters wide and relatively flat (gradient 1°). It is made of compacted gravel, and the width allows access for wheel chairs and people to walk in either direction... there are lots of signs, the track is maintained ...along this path there is evidence of visitor impact where native bush and flaxes have been trampled. [4]



### Evaluation

My research is only valid for the time, day and year of my research. To make an accurate assessment of the aim I need to make more comparisons at different times and seasons of the year. I believe that my research process is valid. The strengths are that the weather was good on the day so people came to visit the glacier; if it had been rainy all day then I think that the visitor numbers would have been smaller. I collected my data well, but there were some problems with calculating the gradient of the slope for the cross section. The clinometers could only calibrate a large slope angle so we had to estimate the slope angle when the gradient was small [6]. This may have affected my findings and the overall profile of my cross section at sites 1 and 2 [7]. Presenting my data went well but perhaps I could have used more of a variety of techniques to show my results, a pictogram would have been good...

I also think that I should have thought about the impact of the coaches more and counted the people who came off them separately to everyone else. All the people on the coaches went on a guided tour and sometimes they went on a different route that didn't go on the valley floor. This meant that not all of the people stayed on the main access route; this affected my findings and could have implications for my conclusion as there is more than one access to the glacier rope and the impacts of people are over a wider area than I had thought [8].