

Student 3 – Low Merit

## RUAMOKO ERUPTS

**Figure 2: Earthquakes Happening Before the Eruption**

Gas bubbles, discoloured water and ground uplift

**Key**  
Earthquakes

Earthquakes are occurring in these areas, as magma moves up into the lower part of the earth's crust. (People cannot yet feel these earthquakes.) The strongest is 4.5 Magnitude on the Richter scale, possibly resulting in damage to properties.

**Figure 6: Areas Affected by Falling Scoria, Shockwaves and Lava Bombs**

**FALLING SCORIA**  
Heavy falls of coarse scoria and ash erupt and cover a circular area with a 3 km radius from the vent.

**LAVA BOMBS**  
Large 1-m-sized lava bombs are thrown 300 m up into the air. They fall in this area, which has a 1.5km radius from the vent.

**SHOCKWAVE**  
The ash and steam that erupts 8km up into the air causes a shockwave that blows out windows within a 2km radius of the vent.

**Figure 5: Areas Affected by the Ash Cloud**

Ash cloud drifting to the north-east

Railway tracks covered in ash

Ash cloud drifting to the south-west

State Highway 1 and 20 will be affected by the ash

Auckland International Airport has to be closed due to the nearby ash cloud stopping planes from landing and taking off.

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Identify the areas' directly at risk and the immediate impact of a volcanic eruption in the Manukau Harbour.

The areas at risk are the suburbs close to the Manukau Harbour. Onehunga and Mangere would be the most affected because they are closest to the vent and would feel most of the shock wave and get the most ash and even the lava bombs could reach them as they could go up to 1.5km from the vent (see Fig 6) [2]. The wind blows from the SW so it would blow ash on to other suburbs like Ellerslie and possible as far as Remuera and Mission Bay... [3]

People would have trouble trying to get away from the eruption because of the transport links being disrupted. The eruption of both ash and lava bombs would affect major transport links in this area... The ash showers would affect the main highways e.g. State Highways 1 and 20, and railway tracks... (see fig 5) [2]. The ash cloud would also mean the airport would have to be closed... [4]