Tongariro Volcanic Centre is located in the heart of the North Island of New Zealand. In this natural landscape there are various natural characteristics in the area such as relief, climate soils and vegetation.

Relief explains the landscape and this landscape features 3 main peaks. These are andesitic composite cone volcanoes of Tongariro (1968m), Ngauruhoe (2190m) and Ruapehu (2797m). There is also a secondary cone named Pihanga. These volcanic features were formed from the geographic process of volcanism and the tectonic movement of the Indo-Australian and Pacific plates. Lakes such as Lake Rotoponamu also exist in these peaks. There is the major NE to SW fault line of the Taupo Graben in the region, from the cracking of resistant rock. The Kaimanawa Ranges and the Rangipo desert are also situated nearby.

The climate at TVC is quite diverse and can be described as being cool, windy, wet and warm at various times of the year. The average temperature at the top of Ruapehu is -2C while lower down it is an average of 10C-12C. Higher temperatures are therefore felt at lower altitudes. An orographic rainfall exists in the region due to westerly winds coming from the Tasman Sea. This results in a high rainfall of more than 2000mm per year to the west of TVC and a rain shadow on the east of Ruapehu with a low rainfall of less than 1000mm per year.

The natural characteristic of soil is relevant to this case study as there are different types of soil, both fertile and infertile. At the top of the landform is the infertile soil like shale and scree. Lower down is fertile soil such as breccia which is made up of volcanic soils and ash. From this it is clear that the depth of the soil increases in depth and fertility as altitude decrease. As a result, vegetation becomes more complex at lower altitudes.

Vegetation at Tongariro Volcanic Centre varies amongst the areas. This is called vegetation stratification. At higher altitudes vegetation is sparse meaning that there is only snow and ice. Further down lichen and alpine herbs are able to grow. Next, are scrublands are able to prosper. From about 1000-1200m on the western and southern foothills, beech forest and podocarps such as Rimu, Matai and Miro are able to thrive due to the wet climate. Tussocks are widely seen from about 800-1200m. In the Rangipo desert vegetation is very sparse with only the occasional tussock.

This covers the four examples of natural characteristics in TVC; relief, climate, soil and vegetation.