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Caves are both fragile and amazing things. This report will consist of three sections. It will consider the biophysical environment, the human activity in caves and the human aspects of sustainability. Caves are being treated in a lot of different ways but more people need to realise that if we don't change some things then we will lose these beautiful land features as they will be destroyed.

Caves were created many years ago through a long and slow process. Firstly, bones from species that have died and shells build up on the ocean floor and over years become limestone. The tectonic movement between plates pushes up the limestone to create a hill and as this is happening the limestone slightly cracks creating little holes. When it rains the water runs through these little cracks but before the rain flows through it picks up some CO<sub>2</sub> making the drop slightly like carbonic acid. As it enters and goes through the cave it brings little particles of limestone with it and this is how the cave expands....

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..The calcium carbonate can separate and become decoration of the cave which we call speleothems. These are the icicle-like features of a Cave that hang down from the roof. These should look clear but in a lot of cases can become tinged with yellow. Organisms that live in a Cave are often like no other and have always lived in there. Although some organisms, for example an eel that has lost its way, may have had to adapt to living there as they are stuck and can't live without adapting. The majority of Cave life lives nearer to the entrance of the Cave where there is still some source of light, for example the cave weta. Others that live deep in the Cave are generally meant to be there and have been there all their lives, a good example of this is the glow worm..

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have been extracted and the caves are now free, although some ancient caves in Waitomo are not allowed to be entered and are permanently locked up because they mean so much to the Maori people. The caves that are allowed to be entered are to show its history and for people who are genuinely interested in the topic of caving and what it has to offer. A big contributor of human activity in Waitomo is the companies that run tours and tubing through the caves for money which gets around 2000 people a day into the glow worm Caves during the summertime. Imagine the damage people are doing to the caves. The majority of people who go through the caves are tourists and don't understand the ways they need to respect the environment and how them doing one thing could be breaking something that was been made for thousands of years, or that them leaving something there could change the cave life completely and will stay there forever..

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This could be as simple as a tourist walking through and thinking they want a small souvenir and they snap off a speleothem that has been growing for centuries and won't grow back for a long time if they ever do. When travelling through the caves it was sad to see so many cave features like Speleothems broken and just left lying there. Another big contributor to the caves sustainability is the temperature change, as every time they open a door and the breeze goes through it leaves the temperature unnatural and disrupts the Cave life. The average temperature of a Cave is around 13 degrees and can easily be changed.

In some caves companies have put in unnatural sources of lighting and these are really bad for cave life. For example glow worms rely on new life sources to look for their light and then get caught in there web for food because these other lights have been put in for tourists and some of the newborns travel towards the artificial light instead of the glow worm light. This is effectively slowly starving glow worms that live in these parts of the cave system.