In Bram Stoker’s novel, Count Dracula arrives in England by stormy shipwreck at Whitby. His reign of terror begins by stalking the town’s cliffs and over 120 years later, he still has a unique hold over the town. But keen vampire hunters and relaxing holidaymakers alike often miss one of Whitby’s most striking features.

With the lighthouse behind you, look at the cliffs on either side of the harbour. The East Cliff (left, below the Abbey) looks like a high grey wall, while the West Cliff (right) appears a to be bumpy orange cluster.

How do Whitby’s cliffs reveal a story more dramatic than Dracula?
Then over thousands of years the Earth’s temperature rose again. The ice began to melt. Some broke up into huge chunks, called glaciers. On Whitby’s East Cliff, glaciers slowly slipped downhill towards the sea. The glaciers were very heavy and ploughed through the landscape, dragging along rocks, pebbles and mud. This material is called ‘till’. The boulder clay on the West Cliff is ‘glacial till’; a rock made from pebbles and mud swept along by melting glaciers.

So the cliffs look different because they are made of different rocks and in different ways. But that isn’t the only reason…

A faulty combination

Look between the cliffs at the River Esk. The river enters the North Sea here because it can run through a crack in the Earth’s surface called a ‘geological fault’. Faults can be enormous, such as the San Andreas Fault in North America which is over 800 miles long. They occur when rock comes under great physical pressure.

In Whitby the weight of the sea during the Jurassic Period pressed down upon the land. The multiple layers of the East Cliff were stronger than the sandstone of the West Cliff, so a crack formed where the two rock types met. The West Cliff dropped then was pushed down even further by the sea. So despite Dracula’s fame, natural forces have affected Whitby’s cliffs more than supernatural stories.

Viewpoint created by Rory Walsh and David Flintham. Photos: © Rory Walsh

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