

This is the Holderness Coast in north-east England. It's one of the fastest eroding coastlines in Europe and a really useful case study for erosional landforms.

The cliffs here at Flamborough Head erode more slowly than surrounding weaker rock because they're formed of harder chalk. This leaves the headland jutting out.

Hydraulic action forces air into cracks and abrasion makes these cracks bigger. Over time this grows to create a cave. As erosion continues, caves can cut right through a headland to form an arch.

Over time, the arch's roof can become unstable and collapse. This leaves behind a stack, an isolated pillar of rock.

So here we have a step-by-step process where a headland is shaped by erosion. Not all rocks form dramatic landforms.

At Mappleton and Great Cowden the cliffs are made of soft boulder clay.

These crumble and slump quickly at speeds up to two metres per year.

Material eroded from cliffs doesn't just vanish, it becomes part of the process and causes more future erosion through abrasion and attrition.

So, along the Holderness Coast we see slow-forming landforms like caves, arches and stacks.

where the rock is more resistant, but rapidly collapsing cliffs where the rock is softer.