The coastal cliffs in the Newcastle area are made of the Newcastle Coal Measures – once part of the Sydney Basin. These sedimentary rocks were formed from sediment deposited in lakes and re-entrants in the late Permian approximately 235 million years ago. Subsequent uplifts and erosion have resulted in the topography we know today – the headlands, the beaches and the rock platforms along The Bathers Way and beyond.

Our coastline is constantly changing. Some of these changes are slow, such as the erosion of single rock cliffs. Others are much faster, such as the massive flow of Gilbert pumice after a volcanic eruption 2 million years ago. The rocks of our coastline are constantly being reshaped by the forces of climate, land use and humans.

Aboriginal tools
The rocks of the Newcastle Coal Measures were mined long before European settlement.

The Habgood Talus consists of layers of volcanic ash. This ash originated from volcanic eruptions that would have covered the landscape, reducing sunlight to the earth. As the ash settled, it was compressed and eventually lithified into rock. The talus contains a rich variety of fossils, including plant and animal remains. The ash originated from the eruption of the volcano that created the Katoomba Volcano. The talus is a significant archaeological site, as it contains evidence of Aboriginal occupation for thousands of years.

Coal
The Newcastle Coal Measures contain a number of coal seams that were mined by the locals. The most common seams are those of Wollombi, a small town located near the city. The coal is of high quality, with a low ash content and good coking properties. The coal was used by the locals for heating and cooking purposes.

Geology doesn’t end at the coast. In fact the rocks of the Newcastle area are made up of a variety of minerals, including silica, quartz and feldspar. The rocks are often exposed in cliffs and beaches, providing a variety of geologic features to study. The Newcastle Coal Measures extend out under the sea up to 10 km offshore. The sea floor is made up of sand, silt and mud, with a variety of marine life found in the area. The rocks of the Newcastle area are constantly being reshaped by the forces of climate, land use and humans.

The Lower Hunter Valley has a long history of earthquakes. In recent times, a number of earthquakes have occurred in the area, including the 1837 Newcastle earthquake. The Newcastle area is located in an active seismic zone, and is prone to earthquake activity. The Lower Hunter Valley is home to a number of towns and cities, including the city of Newcastle, which is the largest city in the area. The Newcastle area is home to a number of industries, including coal mining, agriculture, tourism and education.

Our wonderful city
Newcastle is a beautiful city, located on the shores of the Hunter River. The city is home to a number of parks and beaches, including Nobbys Beach and The Bathers Way. The city is also home to a number of museums and galleries, including the Newcastle Museum and the Newcastle Art Gallery. The city is a great place to live, work and visit.

Oceology of the Newcastle coastline
The Newcastle area is home to a variety of marine life, including fish, birds and mammals. The area is also home to a number of marine environments, including seagrass meadows, coral reefs and sand flats.

Earthquakes
The Lower Hunter Valley is home to a number of earthquakes. In recent times, a number of earthquakes have occurred in the area, including the 1837 Newcastle earthquake. The Newcastle area is located in an active seismic zone, and is prone to earthquake activity. The Lower Hunter Valley is home to a number of towns and cities, including the city of Newcastle, which is the largest city in the area. The Newcastle area is home to a number of industries, including coal mining, agriculture, tourism and education.

Building a city
This development of Newcastle has been dependent on the local geology. The settlement started on freshwater springs in the 1700s. On the coast, communities developed on coal revenues, such as at Wallsend, Lambton and Charlestown. Major changes and redevelopments work to the 20th century of development of suburbs on the-Beach, such as Duluxvale and Tuggerah. The Newcastle area has been a popular location for coal mining, with several coal mines operating in the area. The Newcastle area is home to a number of industries, including coal mining, agriculture, tourism and education.