

Phillip Island Photo Essay



Sponsored by Samuel Rath and Vishnu Sivakumar

Location Statement

Phillip is located 140 km
(87 miles) south-southeast
of Melbourne, Victoria.
Phillip Island has the
latitude of: 38.4899° S,
 145.2038° E.

Closer view of Phillip
island key places



Cowes Coastal Features/Rock Type

Based on the picture it can be seen that there is evidence of longshore drift due by the deposition of sand. Moreover, this can be due to strong wind currents moving into the land causing the waves to approach the coast at an angle.

This coast can be classified as a constructive beach as, the waves are depositing mainly sand all along the coast of Cowes and therefore it can also be called a beach.

It is also evident that there is also vegetation alongside the coast. Despite the presence of saline waters, the plantations are sustained, due to sand acting as a barrier to stop the salt from reaching fertile sand.

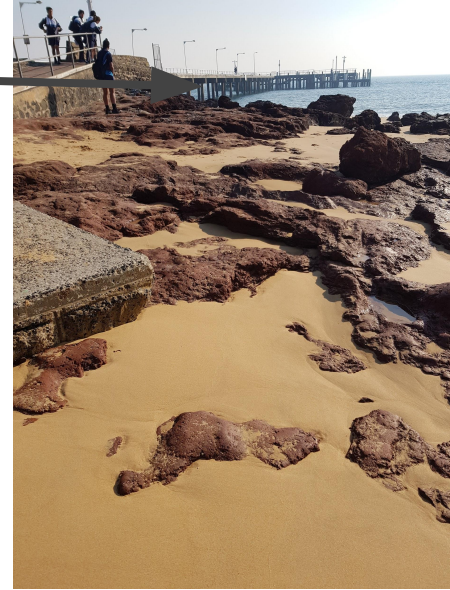


The types of rocks present are mainly Pink Basalt, eroded of the cliffs along the coastal line.

Human Features of Cowes

One of the many human features of the Cowes beach is the construction of pier protruding out into the sea. This can be used for many purposes and the most common purpose is for fishing, which will provide greater resources to the community.

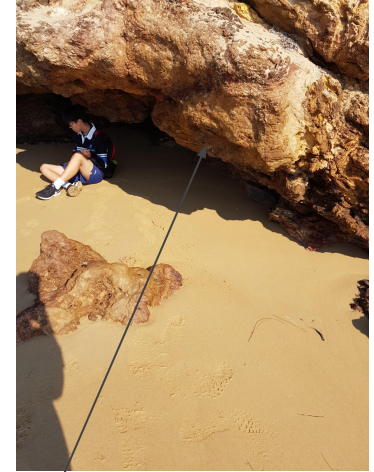
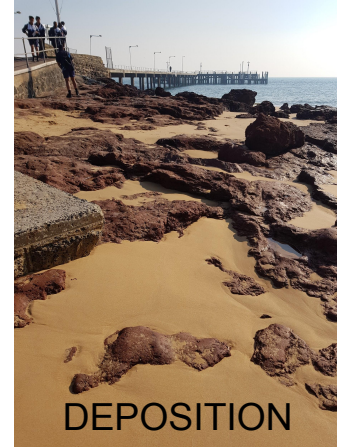
Additionally, another feature is the establishment of groynes. The main reason being to stop longshore drift, which will help to preserve the beach. If groynes were not installed, then it is inevitable that the sand will be washed away and eventually there will be NO BEACH!



Processes and factors that have shaped Cowes

One of the major processes of the Cowes beach is deposition. This can be supported by the mass delivery of sand forming a beach. In addition, the waves also deposit rocks on the coast line. Plus, a large amount of sea particles are being washed onto the shore, which also proves the fact that it is constructive

Moreover, another main process operating in this site is erosion. As shown in the picture below, a cave has been formed due to the constant destructive waves striking the soft rock, and eventually it has eroded away. These rocks are then transported due to longshore drift and they are deposited along coast itself, which can also be referred to as hydraulic action.



EROSION

Management Strategies in Cowes

As a pose to the problem of longshore drift within the Cowes coast, the local council has constructed a groyne which will disrupt the waves flow in between and trap the sand. This will end the problem of sand being washed away from the beach and deposited elsewhere. However, it has recently been reported that the groynes have deteriorated and is therefore, not trapping sufficient amounts of sand. Due to this, the council is planning to reconstruct many of these groynes and preserve the beach.

In addition, another management strategy in place for the Cowes, is the sea wall, which was potentially built in the earlier stages to stop the erosion acting upon the rocks. As we can also see, it is evident that the water had initially been closer into the land, which is the reason for the huge build up of sea particles.



Rhyll Inlet Coastal Features/Rock Type

Likewise, another coastal feature is the sand island in the middle of the water body. This huge mass of sand is the result of constructive waves moving into the inlet. This also depicts the overall nature of the waves as we can infer that it is mainly constructive, as sand is ONLY added to the island but very little is being washed away.

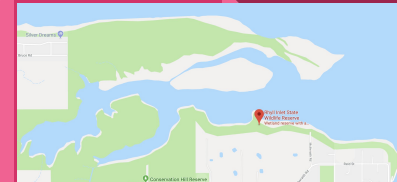
One of many coastal features of Rhyll Inlet is the estuary formed allowing the water from the wetlands to pass through to the waters leading to the bass strait.



Another feature of the Rhyll Inlet coast, is the vegetation beside the flow of water. As it is evident, mangroves are the most common among the various types of plantation. These mangroves further help to reclaim the land and protect growth of plants behind it.



The most common rock type can be described as basalt, deposited by the waves moving out into the estuary.



Human Features/Management Process of Rhyll Inlet

Humans have greatly impacted the coast of Rhyll Inlet, one of which is the 2.1 kilometer walk which has been given the difficulty rating of easy. This trail makes it much easier to adventure the coast of Rhyll Inlet, which has made it popular among the community.

In addition, another feature is the viewing platform at the end of the walking trail. This has been constructed above the ground clearance, potential to leave the vegetation undisturbed. The platform itself has been constructed by mainly wood, and also components a grilled mesh overlapped on the trail and platform to avoid tripping hazards.

The local council also incorporated rubble pathways, to stop the over solidification of mangroves, this the main process being operated in the Rhyll Inlet.



Processes and factors that have shaped Rhyll Inlet

Deposition: This can be seen as one of the major processes operating in the coast of Rhyll Inlet. For instance, the sand island being formed within the displacement of the water shows that the waves are constructive. Moreover, another example can be the small particles of rocks being delivered by the swamp on the edge of the bank, which can also be referred to as transportation.

Erosion: An alternative process shown, is erosion. It can be said that the rocks being deposited by the sides of the water way, is being eroded from huge rock bodies further into the land.



Cape Woolamai Coastal Features/Rock Type

On the picture on the right we can see various coastal features, some include:

Headland- Caused by differential erosion, whereby softer rocks erode at a faster rate compared to the more steadfast rock. In this image we can observe the origin of the erosion is from the impending destructive waves crashing into that head land

Destructive waves- Created by high winds whereby the fetch (distance covered by wind over water, in a constant direction) is greater and wind duration is longer resulting in massive and destructive waves. This which impacts

Beach- Constructed when the destructive waves hit the shore line and sediments are deposited such as sand along the shore. This beach is also flat due to the constant backwash (wave the brings sediment into the sea) power which enables the shore line to be levelled.



Rock Type: Pink Granite, formed by the cooling of magma over the millions of year. Despite being heavily eroded and covered in moss this structure stills stand elegantly

Human Features of Cape Woolamai

Over the years, Cape Woolamai became one of famous tourist attraction in Phillip Island. Therefore there have been some human features that is established at this soothing area, some include:

Wooden Ramp- Established in 1968, the wooden ramp has a sole purpose of providing stable walkway from the carpark onto the beach. However there are some negative impacts that this wooden ramp have: it blocks sand from the sand dune, which stabilizes the soil.

Footprints- Tourist are inevitable in this exhilarating environment, however their are some feature left behind by us which are footprint. Too many footprints can have a gradual negative impact on the soil of this environment, which makes the sand more vulnerable to the winds.

Signs- An additional human feature installed to alert tourist of dangerous waves and snakes, wasn't very effective as most of our class didn't notice until Ms Abel reminded us that was one in the first place.



Carpark- Not a wise construction, due to the location. It allows cars to be parked without disturbing the environment but sand can easily access the carpark making it a dangerous place for cars due to the slippery surface created by the sand.

Processes and factors that have shaped Cape Woolamai

Erosion- A major process which is responsible for the for shape of the rocks at Cape Woolamai, destructive wave with high energy crashes onto the headland eroding softer rocks at a quicker rate in comparison to harder rocks. This process is referred as differential erosion

Deposition- This process starts when constructive waves formed by prevailing wind, carries sediments from eroded rocks and escort into the shore. Which eventually results in the beach we see nowadays.

Transportation- Following on from deposition, we have a process of transportation. Here is where sand have been transported from the beach into a sheltered area, forming sand dunes. Sand dunes play an important role in protecting the inland from wind and water intrusion, hence why transportation is a significant process found in this area.



Photography by Vishnu Sivakumar

Management Strategies in Cape Woolamai

There isn't much measures in managing Cape Woolamai, this is due to the limited tourist that visit this cape. Only popular during summer season for relaxing, outdoors activity such as swimming and surfing are prohibited. This is due to strong waves which poses as a great risk, therefore we can say that his sign to the right serves as management strategy at Cape Woolamai. Therefore the benefits outweigh the cost whereby no risk are considered.



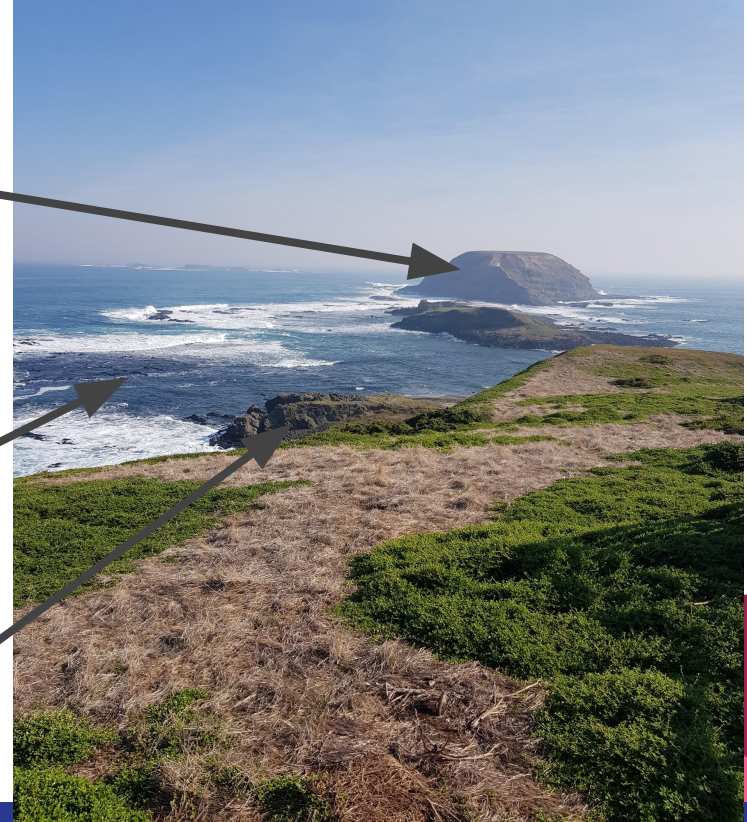
The Nobbies Coastal Features/Rock type

Within this infamous tourist site we can observe many unique coastal features, these includes:

Stack- Formed by the tedious waves caused by prevailing wind, differential erosion takes place whereby weak rock material on the side which have eroded onto platform. The hump of rock taking in the waves force is what we refer to as a stack.

Wave-cut platform - this coastal feature is to be observed to the side of the stack, smooth plane of which used to be stack. Now fallen prey to the destructive waves... only the platform remains. However on the brightside it is an admirable coastal feature as we can see crashed waves flowing on top of it.

Rock-Type: At the Nobbies there is only one type of rock that can be discovered at Port Phillip which is Basalt :D This basalt came from the lava which cooled down from the volcanoes millions of years ago! Very angular shape due to distance it has moved over the cooling duration.



Human Features of The Nobbies

There are many human features that are portrayed at The Nobbies, for example this sign is a creation in which many rules are to be followed distinct . This is to provide a safe and eco friendly environment for the tourist and penguin which visit and dwell here.

Other human features include the wooden walkway that has been constructed throughout the area. Generally speaking, this is to prevent any destruction to this scenic and keeping the penguin safe from human's weight (in a case a person falls onto a penguin) .

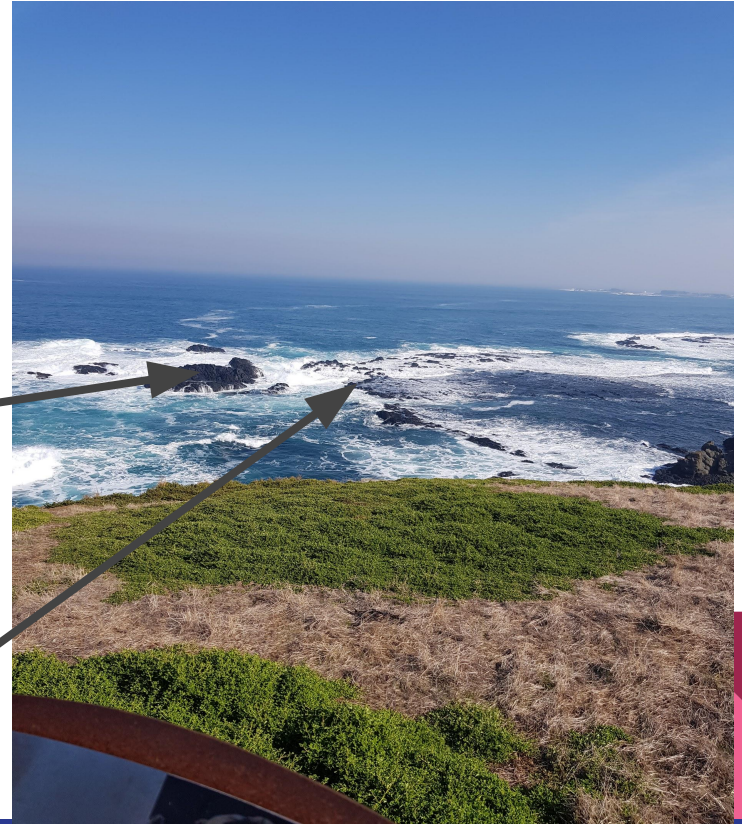


Processes and factors that have shaped The Nobbies

At the Nobbies, many intricate processes and factor have contributed in creating the coastal and geological structures at The Nobbies some include:

Erosion- This natural process whereby wind travel over a great fetch form high energy wave. The wave known as “destructive wave” crashes onto stack/headland. What we observe is a long process of erosion whereby this stack have been fully decimated.

Weathering- Is evident at the site, whereby water the main component which dissolves the surface of the rock. This enables the rock to be vulnerable to erosion in which the geological structure are shaped.



Management Strategies in The Nobbies

There are many management strategies that occur at the Nobbie, wooden walkway way constructed throughout The Nobbies. This is to prevent destruction of natural environment from tourist. A key management that has been a positive influence in the Nobbies has been the penguin's home. This small dwelling provides penguin from the environment.



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