



Ryde to Seaview coastal flooding investigation



Ryde is the largest town on the Isle of Wight and, due to its accessibility from the mainland, it is popular with tourists and day-trippers, making it a thriving resort.

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- ✓ The causes of flooding
- ✓ The need for coastal protection; the socio-economic and environmental importance of each location
- ✓ The SMP/management strategies in place

Below is some information on both locations which you should read carefully and discuss with your teacher, before you begin your survey.

Causes of flooding in Ryde

In Ryde, Monktonmead Brook is one of the reasons that this location made such a good site for the early settlement of 'La Ride' as the stream provided fresh water. However, that stream has been causing trouble!

The Brook has burst its banks during times of heavy rainfall and/or high tides many times, causing extensive flooding and damage to property. Building in the area means that, in times of heavy rainfall, surface runoff is rapid; water reaches the Brook quickly and it can be quickly overwhelmed. Also, during high tides, the water can be unable to escape quickly enough and 'back' up in the Brook.

Causes of flooding in Seaview

Although there has been a sea wall at Seaview for over 200 years, this stretch of coastline is exposed to northerly winds and winter storms have breached the defences and caused frequent flooding, leading to damage to properties and valuable assets.

A £4.7million coastal protection project to replace the old sea wall and upgrade defences was completed in 2004. There are, however, concerns about coastal squeeze due to sediment supplies from the offshore accretion zone in Ryde Sands changing as sea levels rise.

The need for coastal protection

You are going to investigate the socio-economic and environmental 'need' for protection along this stretch of coastline, from Ryde to Seaview. Discuss with a partner what you think this means, and then, with the help of your teacher, write down your ideas here:

1. The **socio-economic** 'need' for protection means...
2. The **environmental** 'need' for protection means...

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The Shoreline Management Plan (SMP) for Ryde all the way east to Seagrove Bay (east of Seaview) is to 'Hold the Line' for all three 'epochs' (0-20, 20-50 and 50-100 years) in all areas.

The policy aims to 'maintain the important regional and national economic viability of the area, including transport links', to 'continue to defend the built and recreational assets', and also to 'recognise the important conservation value' of this stretch of coast.

The management strategies implemented here will be maintained and upgraded to maintain the current position of the coastline. This involves hard engineering and sediment movement control.

You will observe the coastal protection strategies as you walk from Ryde to Seaview; many are shown in the photos below and on the next page.

You should look out for each strategy and consider how it is helping to prevent flooding and/or erosion along the coastline and, therefore, how each is helping to protect the valuable socio-economic/environmental assets you have identified.

Curved sea wall and rock armour at Ryde



Monkton Mead Pumping Station



The side of the pumping station building in Ryde will provide you with a great deal of secondary information to complete your table!



Rock revetment along harbour-side in Ryde



The curved sea wall and promenade extending east along Appley and Puckpool Park

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Curved sea wall, rock revetment and rock groyne at Seaview



The sculptor and artist John Maine RA was commissioned to ensure that the coastal protection works were of a high aesthetic standard



Information boards along the Duffer (and Hersey reserve) at Seaview will help you to complete your table!



Limestone gate portals and heavy marine hardwood gates with stainless steel frames, Seaview Duver

Collating your observations...

You will use a combination of your own observations as you walk along the seafront at Ryde, as well as some secondary information provided on the side of the pumping station building in Ryde, and the information boards along Seaview Duver, to complete the table below. *Ensure that you give specific, named examples to illustrate your points!*

The need for protection**Environmental****Social****Eco****Teaching resources by Education Destination Ltd.**

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**Strategy
observed****How it helps to reduce erosion and/or coastal flooding**

Summary: How is coastal protection at Ryde/Seaview meeting socio-economic and environmental needs?



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