

RIVERS

Rivers in Chichester Harbour: Although no major rivers flow into Chichester Harbour there are small rivers and streams, like the River Lavant and the streams at Fishbourne.

What is a river? A river is a moving body of water that flows from its **source** on high ground, across the land, and then into another body of water such as a lake, the sea, or an ocean. A river flows along a **channel** with **banks** on both sides and a **riverbed** at the bottom. Rivers always flow downhill due to the force of gravity.

Where does Fishbourne stream begin?

At Fishbourne Meadows there are several streams that flow into Chichester Harbour (see map of Fishbourne channel). The **source** (the beginning) of many of these are freshwater springs in the chalk hills of the South Downs, several miles north of the Harbour. Fishbourne Stream begins here and then flows downhill across the land southwards towards the Harbour.

It is a very clean stream as the water has been filtered (cleaned) as it passes through the chalk.

The South Downs north of Chichester Harbour



FISHBOURNE STREAM



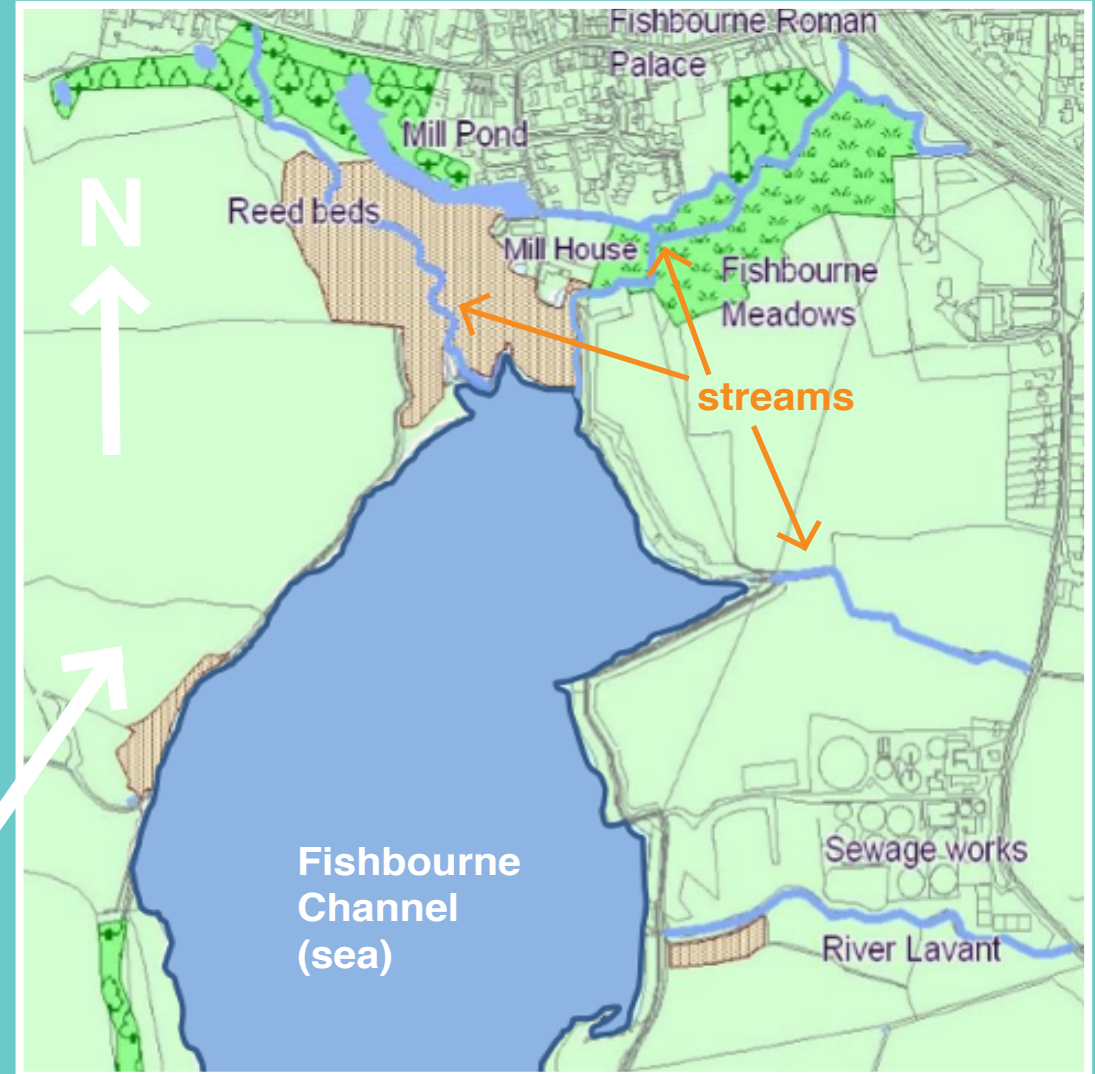
WHERE DOES THE STREAM END?

Fishbourne stream approaches the Harbour at the northern tip of the Fishbourne channel. The freshwater in the stream mixes with the salty sea water and brackish water is formed. As it enters the Harbour the stream ends. The end of the stream is called the **mouth**. You often find reed beds growing here as reeds like wet, swampy places to grow.



Reed beds at the mouth of the stream

Map of Chichester Harbour:



Map of the Fishbourne streams and sea channel

FEATURES OF FISHBOURNE STREAM

As Fishbourne stream flows through the meadows towards the Harbour, you can see some interesting river features...

The stream bends around a corner. This is called a **meander**.



A **tributary** is a smaller stream than joins a larger channel. The point at which the tributary joins the stream is called a **confluence**.

As the water flows along the river, it can wear away the land. This is called **erosion**.



When the riverbed is hard and drops in level, a **waterfall** can form.

When the water slows down, it drops sediment (soil and rocks). This is called **deposition**.

Water can also carry sediment downstream. This is called **transportation**.

When there is a lot of rainfall, rivers often rise above their banks and the water floods the surrounding land. This is called a **floodplain**.



WHY ARE RIVERS IMPORTANT?

Rivers are a source of freshwater; they help to drain water off the land. Rivers have been important to humans throughout history for drinking, washing, cleaning, transport, waterpower, fishing and farming. Rivers are also important for removing wastewater to the sea.

Rivers are important habitats for lots of freshwater creatures. The water vole is a rare mammal that lives in the banks of Fishbourne stream. They are timid creatures and hard to spot, but you often see their burrows and the nibbled remains of their grassy lunch!



WHY ARE RIVERS A THREAT?

Rivers can also be dangerous especially when the water levels are very high. Flooding damages property, blocks roads and can harm wildlife. Rivers can carry pollution and disease. People can drown in rivers, especially if the currents are strong.



Water vole

WHAT HAPPENS TO OUR WASTEWATER?

Wastewater is the dirty water that comes from all buildings when toilets are flushed and when sinks, showers, washing machines and dishwashers are emptied. The wastewater flows along underground sewage pipes to a wastewater treatment works. The wastewater treatment works at Apuldram near Fishbourne, treats all the wastewater from the Chichester area.



Wastewater Treatment Works

The wastewater is processed in several stages before it is released into the Harbour. These stages include filtering the wastewater to remove all the large solids; leaving the water to stand in large holding tanks so that the smaller particles of solids sink to the bottom and are removed. In the final stage ultra-violet light is used to destroy any harmful bacteria. Poor water quality in rivers and seas is very damaging to the environment. It can carry disease, harm wildlife and be dangerous to humans. It is therefore very important that wastewater is treated so that it is safe before entering rivers and seas. Chichester Harbour Conservancy monitors the water quality in the Harbour by carrying out regular tests on water samples