Groundwater: confined and unconfined aquifers

Read this with the guide on how to protect groundwater and prevent groundwater pollution.

Groundwater is stored in rocks, known as aquifers, beneath the ground.

Unconfined aquifers are where the rock is directly open at the surface of the ground and groundwater is directly recharged, for example by rainfall or snow melt.

Confined aquifers are where thick deposits overly the aquifer and confine it from the Earth's surface or other rocks.

Confining beds or cover, such as clay or unfractured mudstones prevent or slow groundwater movement.

Confining cover can cause groundwater to be under pressure. When the confining layer is punctured such as when a borehole is drilled through it, groundwater will rise through the borehole until it reaches the same level as the water table. This is known as an artesian borehole.