

Flood risk from rivers - West

There are several watercourses and areas of interest to the west of Pwllheli. Here three main rivers the Afon Rhyd-hir, the Afon Penrhos and Afon Ddwyrdd merge as they approach the western edge of Pwllheli. They continue towards the town as the Afon Rhyd-hir which enters the harbour through tidal gates below Embankment Road.

Flood risk from these watercourses primarily arises from the rivers becoming “tide-locked” when the gates close during high tides. When this coincides with high river flows from prolonged or heavy rainfall, water levels in the rivers increase, overflowing into the surrounding floodplain. This can result in flooding to people, property and the A499.

These are additional options that will be taken forward for consideration in conjunction with the main options that are shortlisted.

Localised Road Raising

Increasing the height of the roads above predicted flood levels to lessen risk of road closures through flooding.

Natural Flood Management


Natural Flood Management (NFM) is when natural processes are used to reduce the risk of flooding through restoring bends in rivers, changing the speed water flows in rivers and the way land is managed so soil can absorb more water.

Property Flood Resilience

Property Flood Resilience (PFR) are measures that can help to prevent flood water ingress into a building or aid rapid recovery following a flood event.

Dredging

Significant ongoing dredging and channel reprofiling of the rivers to improve flows and capacity.



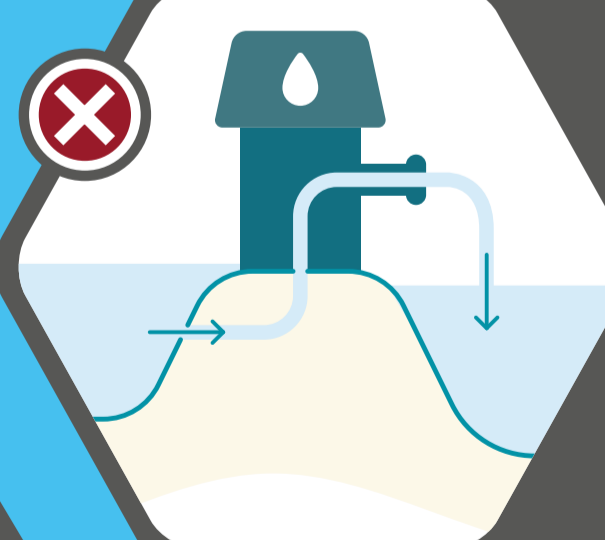
Upstream Storage
Introducing changes in the upstream land to create greater capacity for flood water to be stored there.



River Diversion
A reprofiling of the gradient of the rivers so that it diverts flows to the coast at a new location west of the town.



New Harbour Gates
A regulated barrier at the harbour entrance to create capacity within the harbour to manage river flooding and equally to manage tidal flood risks from storm surges.



Overpumping on the Afon Rhyd-hir and Afon Penrhos
High volume pumping stations to be constructed in Pwllheli, designed to pump high river flows to the sea when high tides would otherwise cause a backing up effect.



New Flood Defences
Localised defences within the town centre where they can provide direct protection from river flooding.