



Key term glossary

TIDAL OPTIONS

Raise flood defences

Increase the height of the existing defences around Pwllheli, including the groynes, sea walls, and rock armour.

Improvements to the existing harbour walls to meet future demands.

Improve harbour defences

Upgrade existing coastal defences

Improve and adapt the existing defences around Pwllheli, including the groynes, sea walls, and rock armour to accommodate future storm events.

Increasing the volume, height, and depth of the sand dunes along the coastline around Pwllheli to provide a natural barrier against future storm events.

Sand dune enrichment and beach nourishment

Introduce groynes and breakwaters

Additional groynes/ breakwaters to be introduced along the coast to reduce coastal erosion and prevent sea reclamation.

New flood defence structures could be created further inland, creating more manageable 'set back' lines of protection to accommodate the predicted rises in sea level and future storm events.

Realignment of coastal defences landward

FLUVIAL (RIVER) OPTIONS

Natural flood risk management options

Using existing natural flood plains and landscape to capture water and reduce the speed of flow towards Pwllheli. This includes restoring floodplains, woodland planting and introduction of ponds and wetlands.

Localised raising of the A499

Increasing the height of the A499 to reduce road closures through flooding.

Improving flow capacity in the river network at key pinch-points to minimise flooding impacts.

Watercourse conveyance improvements

Targeted localised dredging of watercourses

Removal of silt and debris from the river systems to increase flow capacity.

Introduce new defences and or increase the height of the existing defences including river embankments and localised flood walls.

Improve flood defences

Pumping based solutions

Pumping stations to be installed in Pwllheli to improve river discharge rates during high tides.

Utilising the existing topography including river valleys and low-lying fields to act as flood storage areas during storm events.

Upstream flood storage within catchments

Watercourse diversions

Changing the location of the points where the rivers enter the sea at Pwllheli so that they do so prior to reaching the harbour.