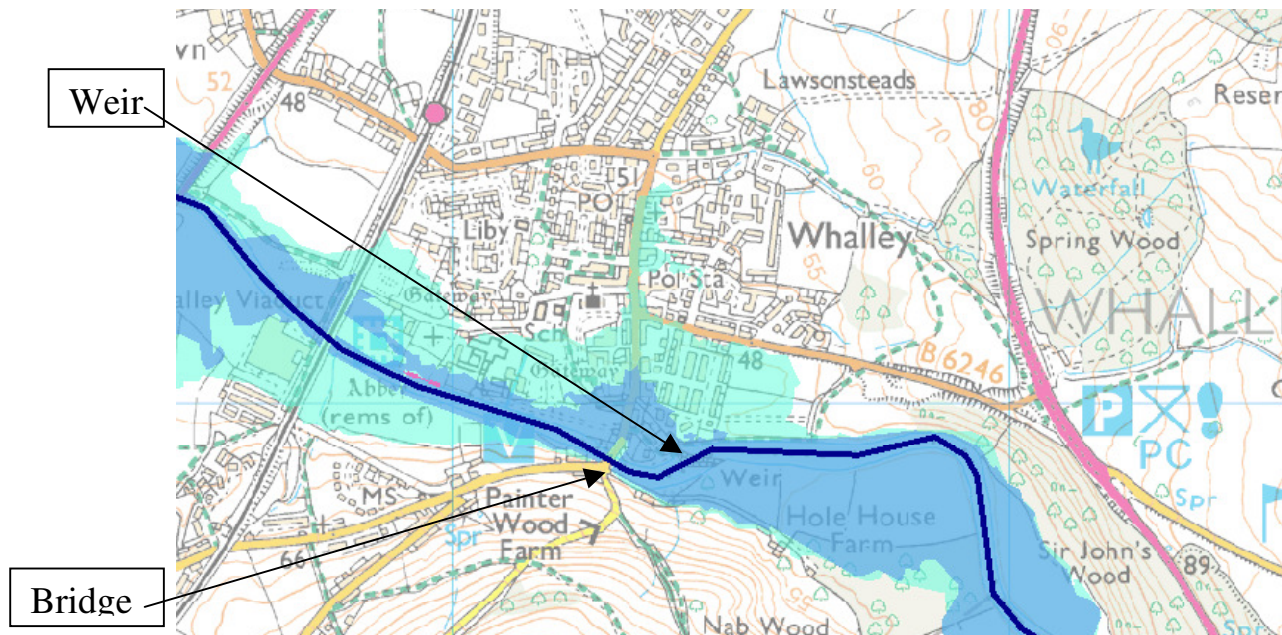


Flood Risk Assessment for Whalley Hydro

The Archimedian Screw will have an electricity output of 100kW derived from a river characteristic shown in the table entitled “Target Flow Division” and the abstraction flow rate is shown on the graph with the same name.

A residual flow at Q95 of 1.950 m³/sec is envisaged.

Control gear will be installed that regulates the flow over the weir, the fish pass and finally into the screw so that sufficient water is available for the weir and the fish pass.



Flood Map Whalley, Lancashire at scale 1:10,000

The scheme will be located adjacent to the weir and so the flow over the weir in flood conditions will not be reduced. The proposed works will improve the flood protection regime upstream of the weir due to increased capacity at the weir. The extra channels created for the fish pass and Archimedian Screw should reduce the localised flooding caused by the restrictive flow through the downstream bridge by hastening the flow in the build up to flood conditions thereby reducing the total height of the flood water.

The building housing the generator and control gear could restrict the flow of floodwater but the added flow of water beneath the building will more than compensate. With reference to the Detailed Contour Map (attached), the expected flood height around the building should be lessened due to being sited a little higher than the surrounding area.

All sensitive equipment within the building will be sited above the 100-year flood level and the inlets for the internal breathing will be sited above this level too with the outlet at eaves level. The floor area will rely on the integrity of the entrance doors but no items subject to water damage will be kept at this level.