#### Inland Fisheries Ireland

Close to Nature Type's of Fish Passes

Inspector Alan Cullagh





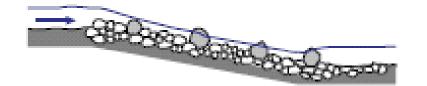








# **Bottom Ramp and Slope**

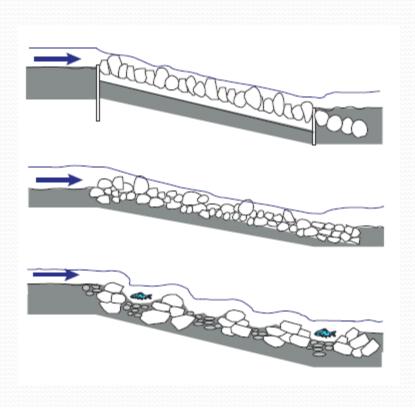


 Extends the entire width of the river

 Originally designed for stabilising river bed

• Slope 1:20 to 1:30

#### **Bottom Ramp and Slope**

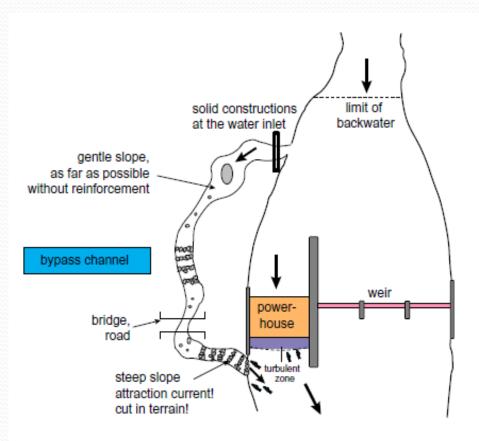


Embedded Boulder (Piles or Stakes)

 Rock Fill Construction (Bed must be stabilised)

Boulder Bar Construction

### **Bypass Channel**

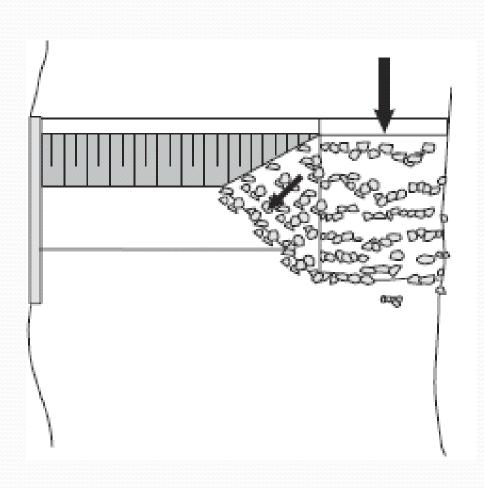


New river around the obstacle

Gentle gradient

May include boulder sills

## Fish Ramp



- Slope greater than 1:20
- Partial river width boulder sills
- Perturbation Boulders

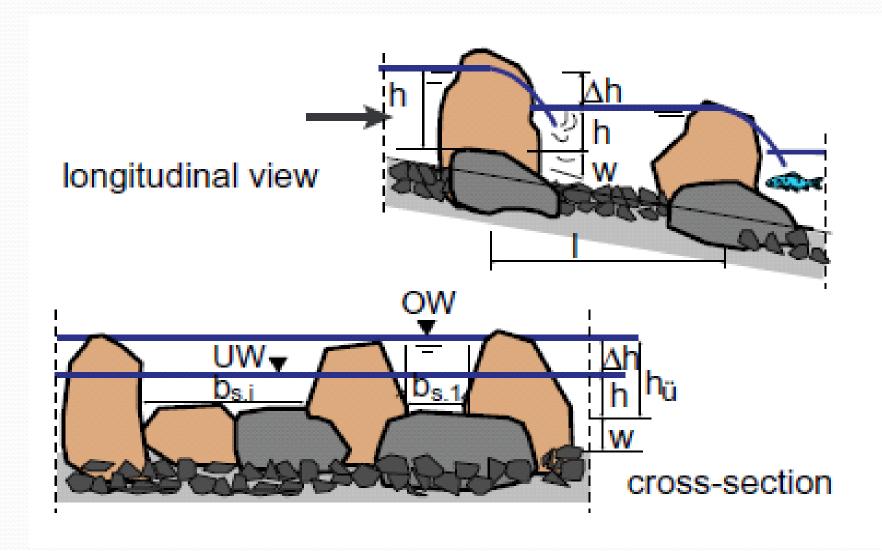








# **Design Calculations**























## Thank You

Questions?