hydro engineering structures as groynes or longitudinal dikes. Furthermore, the design of those objects should assure that the structure of the crossing itself is not endangered by different hydrodynamic conditions, but also prevent the river channel from being destroyed. In the case of „Gassy ferry crossing" there are two groynes accompanying the construction, one upstream and one downstream, both at the right bank. However, they only prevented the right beachhead from the destruction, not serving this function for the river channel.

In addition, the design of such structure as a ferry crossing should take into account the existing river regulation system. The heads of the crossing abutments should not project beyond the edge of the river's regulatory route. In the case study this condition is not fulfilled, as the width of regulatory route for Warsaw's Vistula is 220 m, whilst the width of a ferry crossing is 190 m.

Last but not least, when designing any structure that is contracting the flow of the river there should be taken great care about the localization of it. There will be different conditions considered for the structure localized at the run, than for a structure placed at the meander. The same applies to the localization of the crossing at the cross-section. Whether the crossing will be designed directly in the center of the cross-section or it will be set aside, there will be different circumstances created by this structure.

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