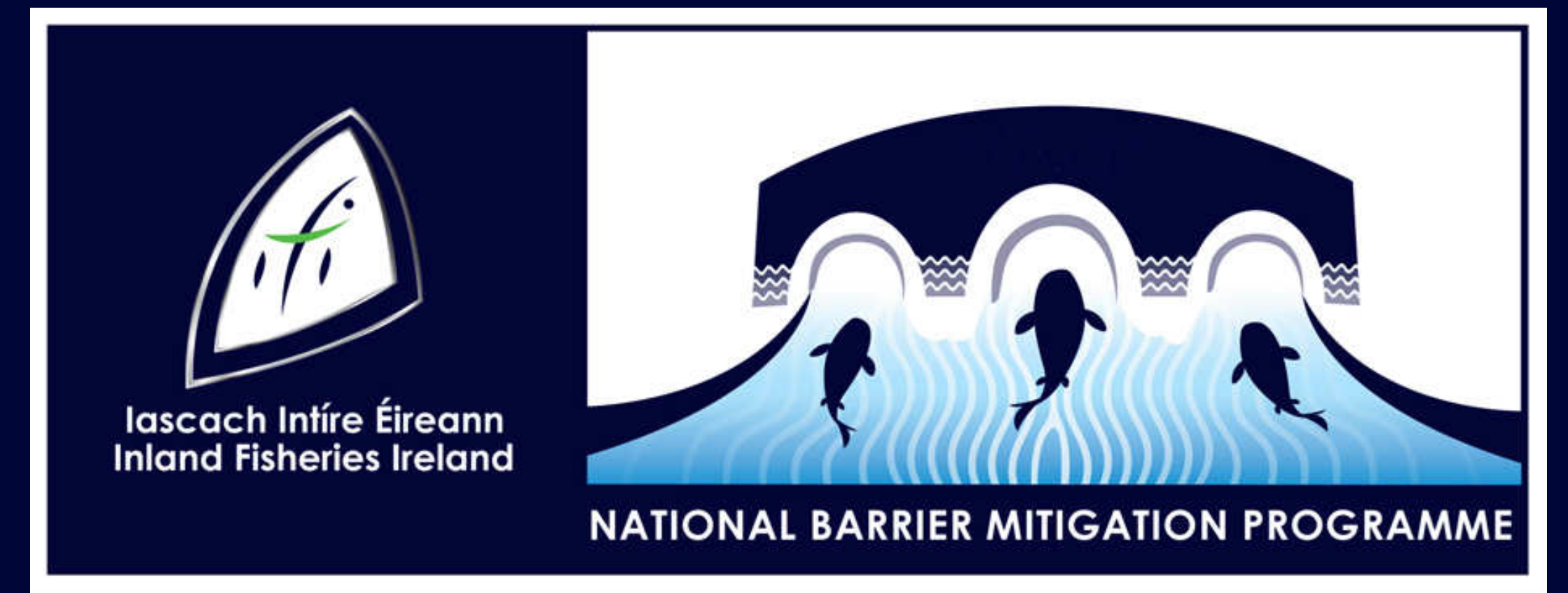


BAKERY WEIR



The Bakery Weir Partial Removal project is located on the River Suir, in Cahir, County Tipperary. Bakery Weir consists of an 18th Century masonry weir with adjacent Mill structure. IFI completed a barrier assessment in 2018, which found that the structure at Cahir was a significant barrier to migrating salmonids, lamprey and coarse fish.

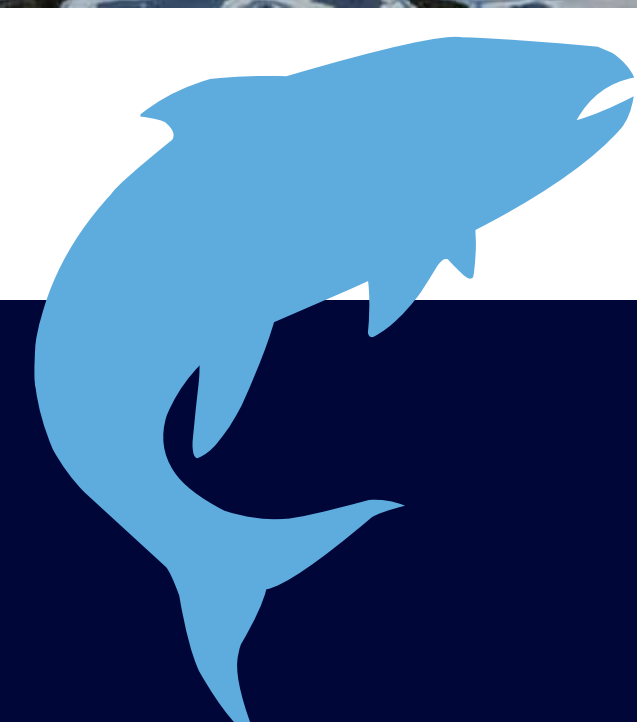
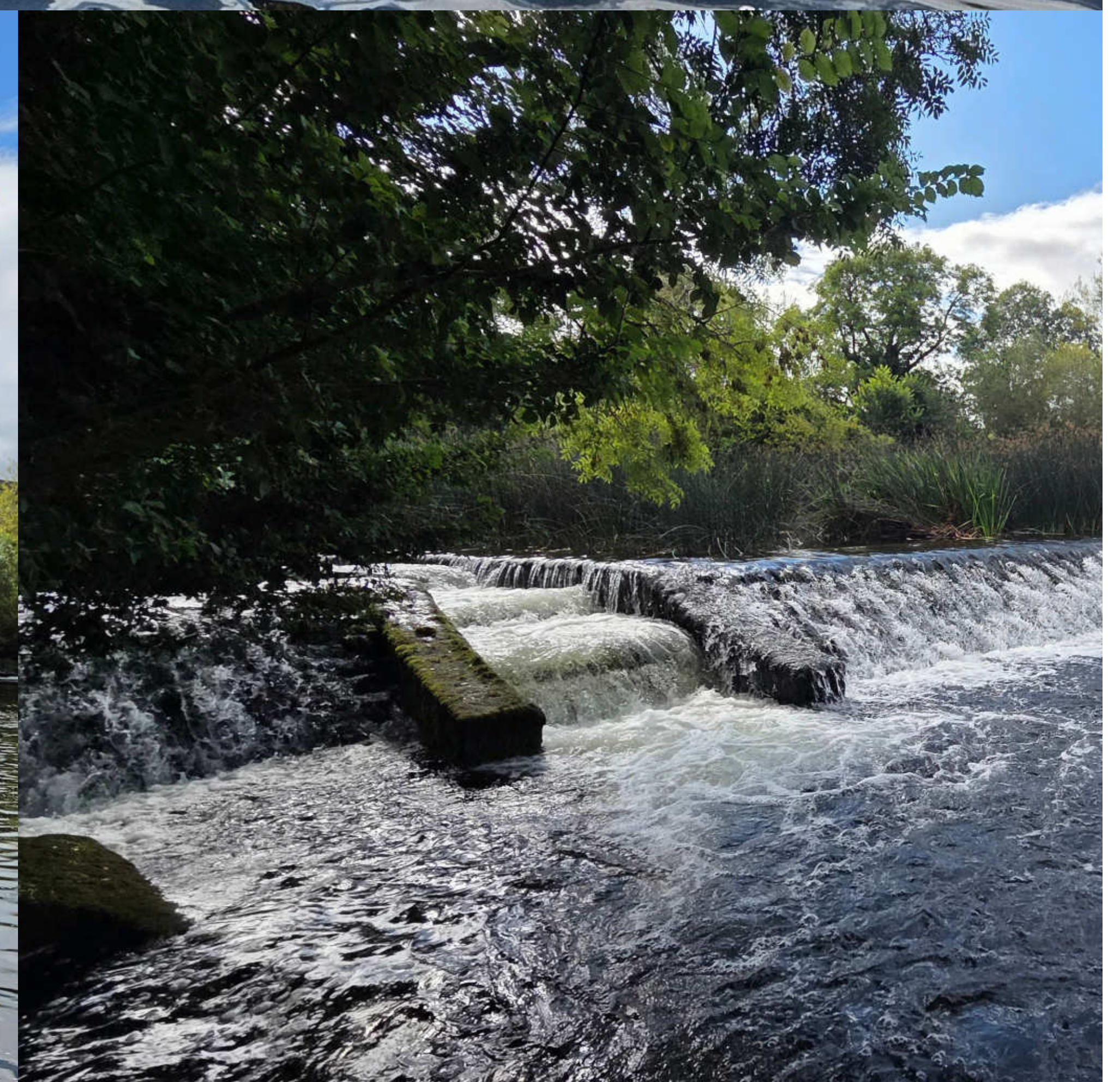
Proposed Design:

The proposed design at Bakery Weir consists of the removal of two thirds of the weir and fish pass on the western side of the barrier. This design provides the best ecological benefits and it allows the creation of a hydromorphologically diverse watercourse and provides a habitat for a variety of small animals, aquatic plants and fish due to the natural characteristics of the restored river channel.

Advantages of the proposed design:

Improvement of the hydromorphological conditions by restoring natural processes in the river

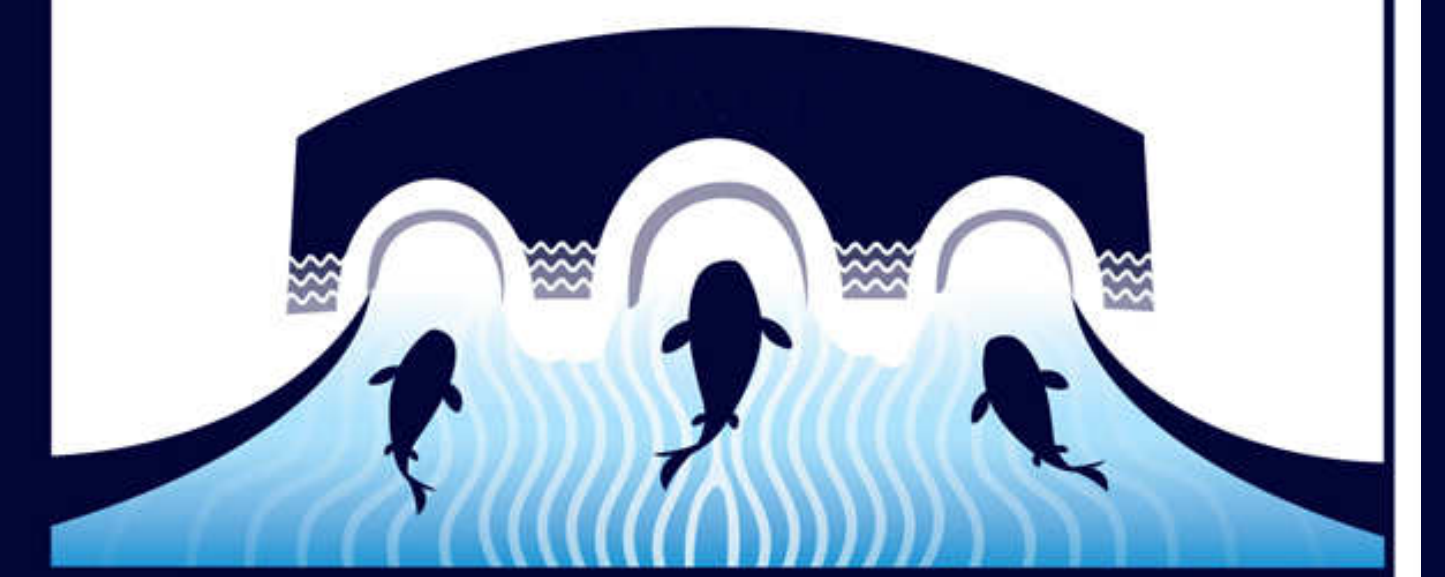
- Nature-like appearance representing the pristine condition
- Restoration of migration for all species
- Alignment in the existing riverbed appears feasible
- Simple construction
- Low maintenance
- Aligns with objectives set out in Water Framework Directive.
- Cost effective
- Ensures no impact on the structural integrity of the mill race and building.



BAKERY WEIR



Inscach Iníre Éireann
Inland Fisheries Ireland



NATIONAL BARRIER MITIGATION PROGRAMME



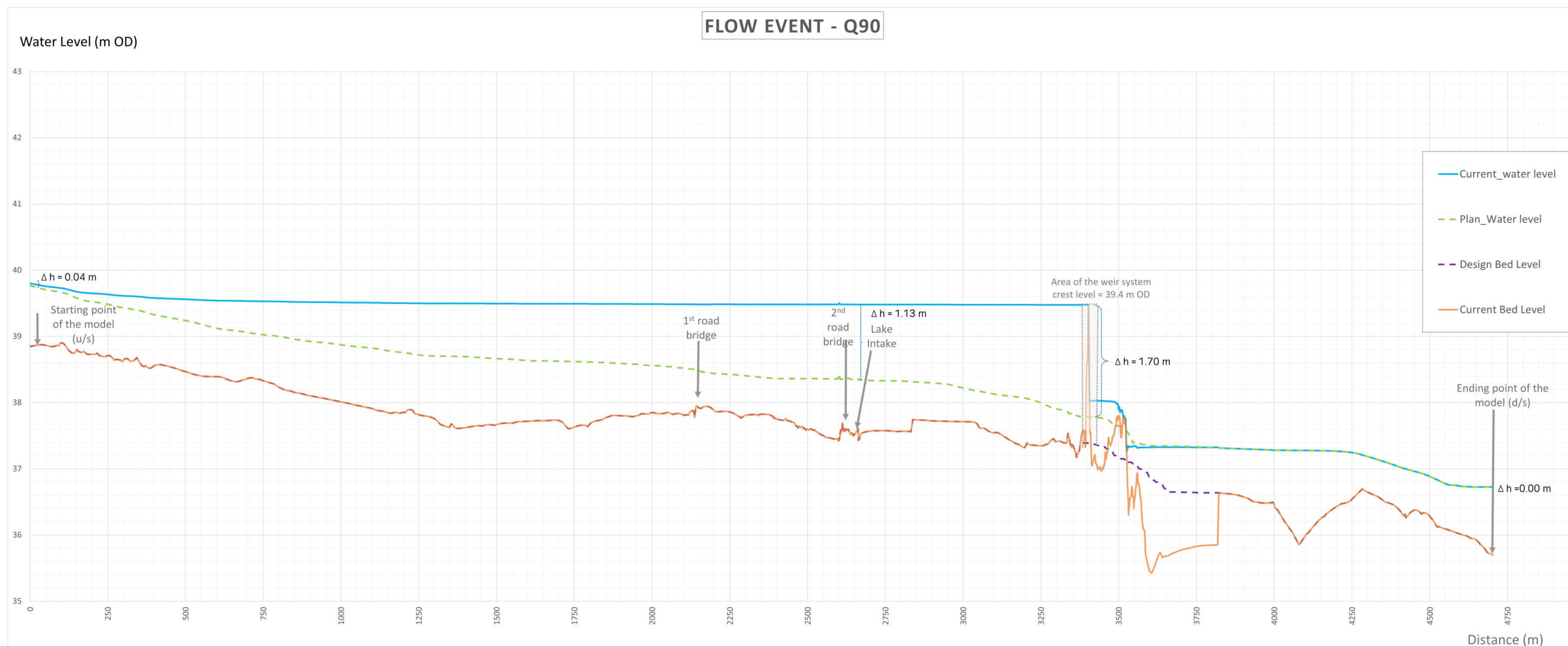
BEFORE



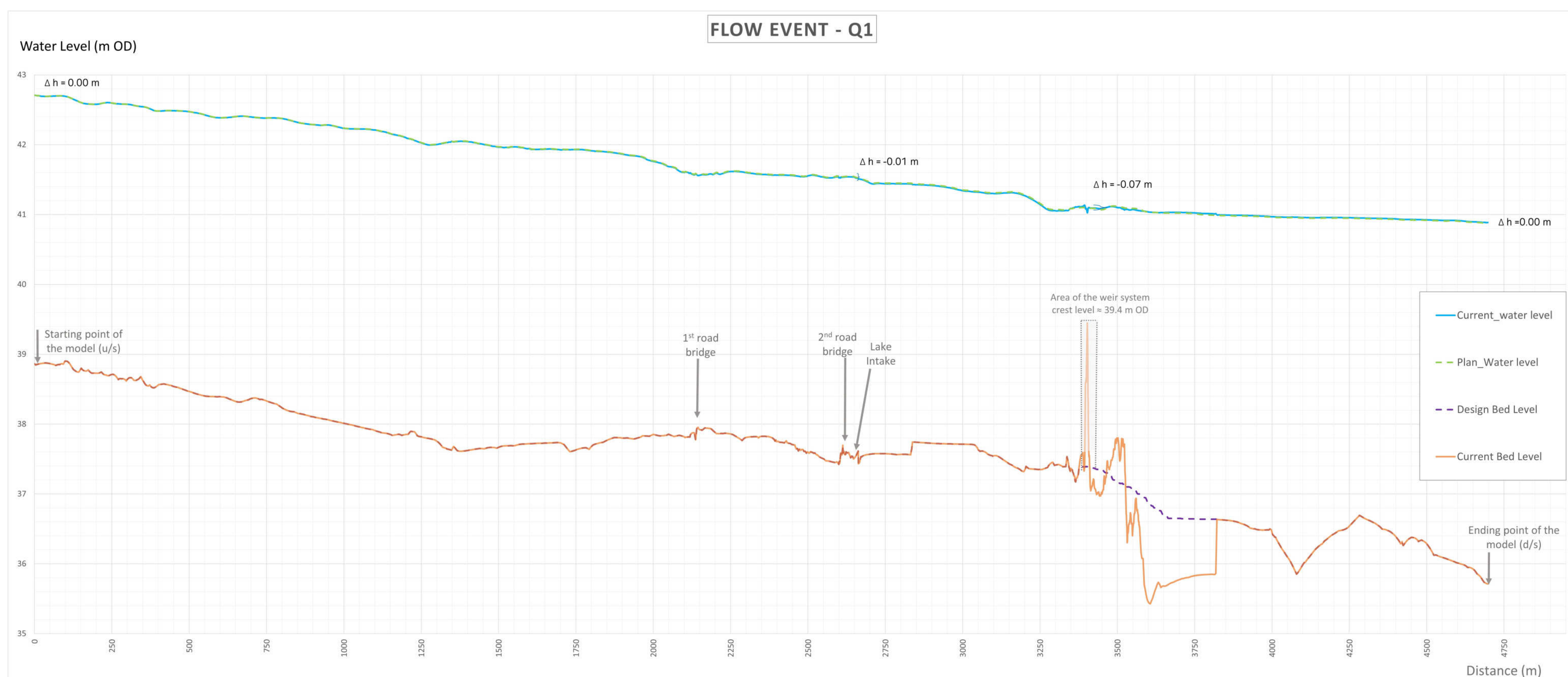
AFTER



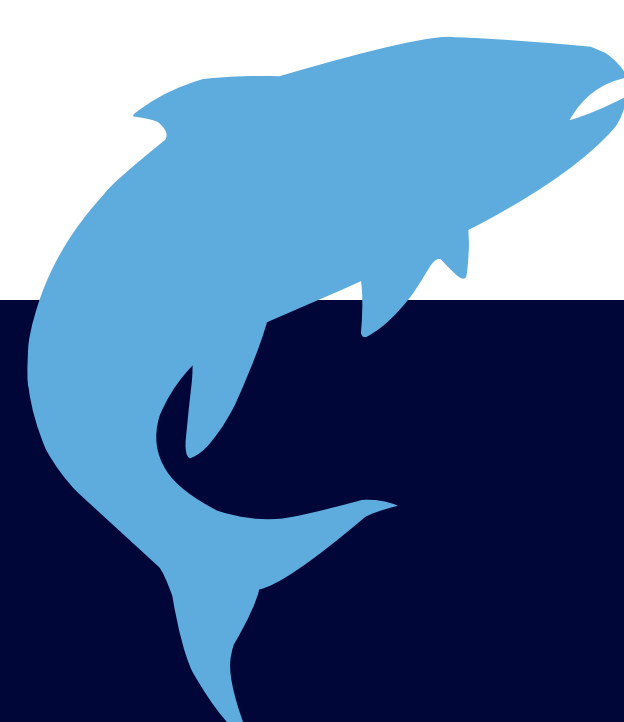
FLOOD ANALYSIS



Q90 flow (low flow) The backwater effect upstream of the weir and the water-level difference compared to the design state is clearly visible. At the upstream model boundary (confluence with River Aherlow), the difference is essentially zero, considering a model accuracy of ± 5 cm. At the weir, there is a max. water level drop of about 1.7 m. At the downstream model boundary, near Cahir, there is no noticeable difference from the current state.



Q1 flow (Year Flood Flow) The design water level remains almost unchanged compared to the current state. The model shows a slight local increase at the weir, which is due to the planned bed elevation in that area, this is clearly visible when comparing the orange and purple dashed lines. However, this difference is within the model's accuracy range and therefore not considered significant. Overall, this is a positive result from an ecological perspective, as the Q1 flow plays an important role in regularly flooding the alluvial woodlands.



BAKERY WEIR



AERIAL PHOTO - ABOVE



LOOKING ACROSS WEIR CREST
TOWARDS MILL STRUCTURE



AERIAL PHOTO - UPSTREAM



OVERVIEW



AERIAL PHOTO - FISH LADDER

