



# **WHITEWATER STADIUM OBSTACLES HOMOLOGATION MANUAL**

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## I. INTRODUCTION

This manual describes the ICF homologation process concerning the obstacles for the artificial whitewater stadium.

The homologation process is conducted by two or three ICF experts (ICF Technical committee members, ICF staff, external advisors) nominated by the ICF Secretary General.

Homologation represents a “system of evaluation” that is designed to guide the development and ensure high-standard equipment dedicated to canoeing are suitable for ICF competitions and venues. It is a process for certification that provides a forum for constructive discussion between ICF experts and providers. The resulting certification represents an ICF stamp of approval for usage of equipment/facilities specific to the environment intended.

The homologation process takes place in two stages:

- Stage 1: Homologation technical file
- Stage 2: Test session in a real whitewater stadium

## II. INTEREST TO REQUEST AN ICF HOMOLOGATION

For several reasons, the ICF shall regularly pass to some national or international sport stakeholders (e.g. Organising committees for Olympic Games, Continental Games, National Federations) a list of technical products and their recognized providers specific to canoeing.

Through the homologation process the ICF wants to reinforce the quality control of the technical products and create a strong link with the providers.

## III. HOMOLOGATION COST

The manufacturer will cover the accommodation of the nominated experts and will pay the ICF a test fee of 4000€.

This fee must be paid to the ICF by the manufacturer before the stage 2 of the homologation process to the ICF.

ICF will cover the transportation of their nominated experts to allow us to deliver the report and follow the homologation process.

The provider will cover all other cost involved in the homologation process.

## IV. STAGE 1 – HOMOLOGATION TECHNICAL FILE

The manufacturer shall provide to the ICF a homologation technical file including the following items:

- Concept of the proposed obstacles
- Presentation of the product pallet for the specific family of obstacles
- Materials used in construction or formation of the obstacles/devices
- Technical description including size, weight, fixation system etc.
- Constraints of the obstacles in the construction of a riverbed.
- If available:
  - Actual user manual
  - Results of previous laboratory test which demonstrate accuracy of the system
  - Video(s) of previous tests

*The homologation technical file shall be delivered to the ICF as soon as possible after the manufacturer request the homologation.*

*After analysis of the provided documents, the ICF and the manufacturers will coordinate to schedule homologation stage 2.*

## V. STAGE 2 – TEST SESSION IN A REAL WHITEWATER STADIUM

### A. Goals

The test session has three main assessment goals:

- Ensure the security of paddlers and users (ie. avoid danger of getting jammed or danger from cutting) on the water.
- Demonstrate the capacity to create a large range of water features by changing the obstacles configuration in the riverbed.
- Highlight and show the robustness of the obstacles: deal effectively with a head-on collision with a full raft and complete resistance to the water flow with varying speeds.

The test session(s) shall be to set up in a way to evaluate several schemes for the implantation of the obstacles in the river bed.

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## B. Test session procedure

The duration of the test session is maximum one day. The provisional agenda requirements are:

1. Welcome and discussion about the "homologation technical file".
2. Venue tour with a 1<sup>st</sup> set up based on of the proposed **scheme A** (see section III.C)
3. **Water on** and observation of the water features.
4. Water off and adaptation of the scheme to obtain other water features after discussion between ICF experts and provider.
5. **Water on** and observation of the water features. The ICF can request several times to adapt the position of the obstacles.
6. Water off and set up based on of the proposed **scheme B** (see section III.C)
7. **Water on** and observation of the water features.
8. Water off and adaptation of the scheme to obtain other water features after discussion between ICF experts and provider.
9. **Water on** and observation of the water features. The ICF can request several times to adapt the position of the obstacles.
10. Resistance test of an impact of a full raft on the obstacles. See section III.D for the description of the test.
11. Water off and observation of the impacted obstacles.

*If the length of the riverbed available to allow it, the provider can set up configuration of the scheme A and the scheme B at the same time.*

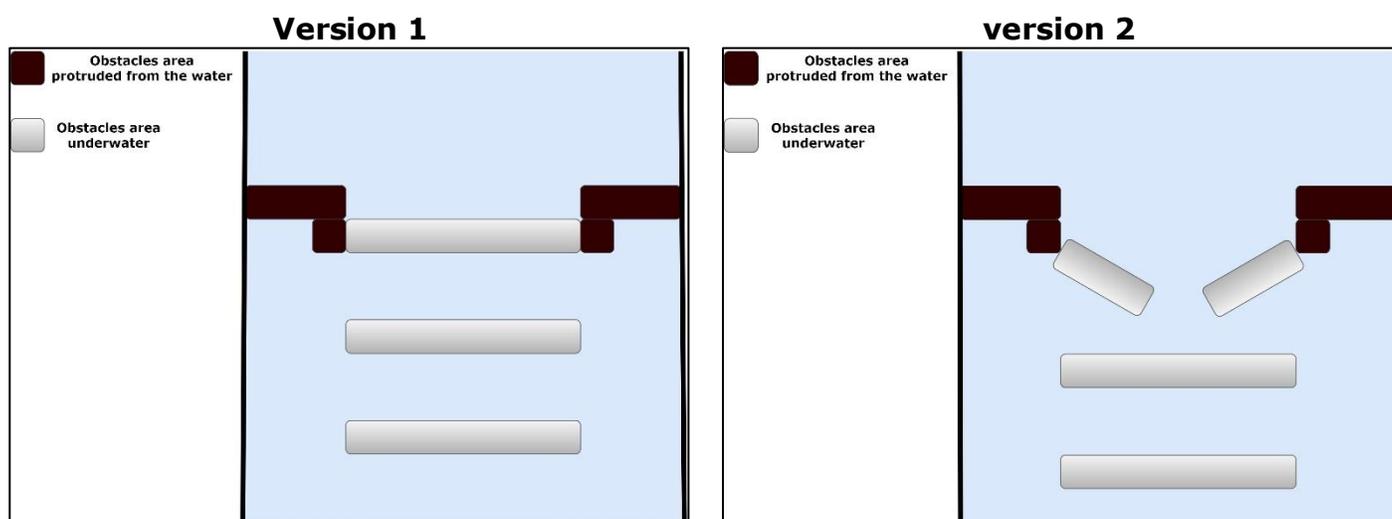
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## C. Basic schemes for the implantation of the obstacles

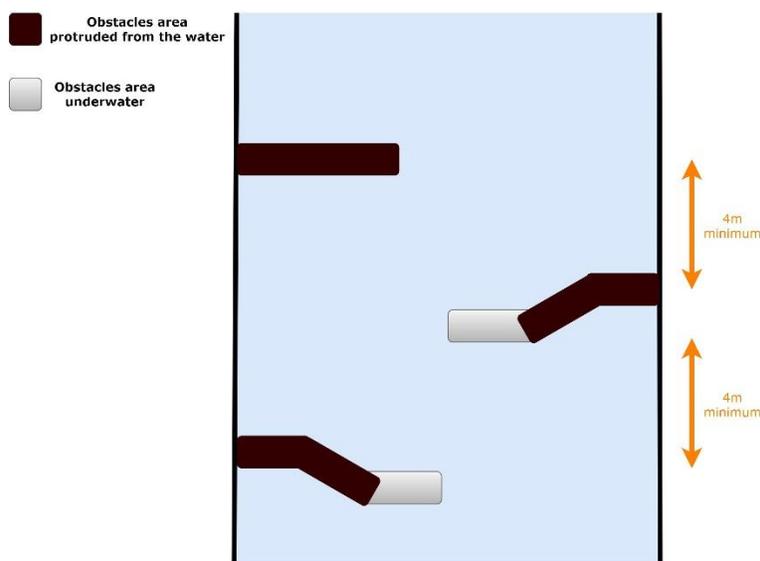
The ICF proposes two schemes to demonstrate the ability of the obstacles. From these basic schemes the provider set ups the obstacles in the riverbed for the test session.

The exact configuration (number, type...) and position (exact location, angle...) is determined by the provider to obtain the best outcome.

### 1. Scheme A



### 2. Scheme B



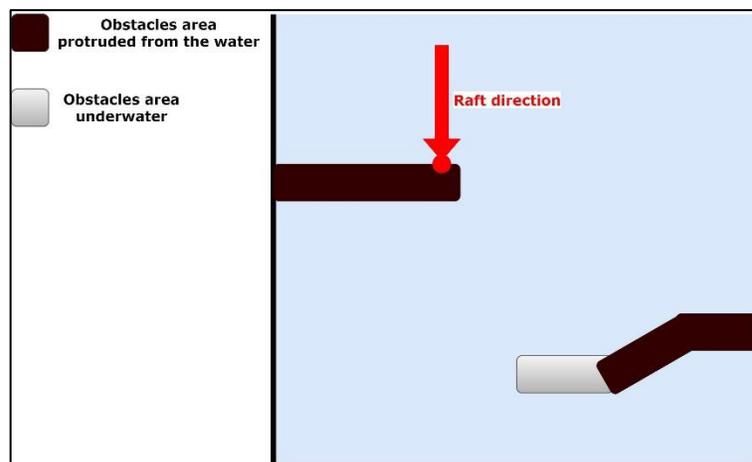
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## D. Head-on impact with a raft

The maximum load the obstacles is expected to show resilience is a head-on impact with a full 8-man raft moving on the water.

The test conditions shall be:

- The total weight (raft and the eight paddlers) shall be, at the minimum 750kg.
- The impact shall happen with a raft at its maximum speed.
- The collided obstacles shall be the tallest being proposed by the provider
- The impact point shall be situated as shown on the scheme:



## VI. CONCLUSION OF THE HOMOLOGATION PROCESS

Following the completion of the two stages, the ICF experts shall deliver a report to the ICF Secretary General.

Based on this report and his conclusion, the ICF Secretary General will officially inform the provider of the results of the homologation process in the next 30 days after the completion of stage 2.