

## REFERENT PROJECT

# Trajectory study - Olympic Games 2024 : Impact of the Olympic Village on the river traffic - Gauge of the river units that can navigate in the secondary arm of the Seine



## CONTACT

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## PURPOSE OF THE INITIATIVE

Cerema has been asked by the Direction Regional and Interdepartmental Directorate of Equipment and l'Aménagement Ile-de-France (DRIEA) to carry out a manoeuvrability study in the context of the project the Olympic Village development project for the Olympic Games 2024 in Paris. The Navmer software was used to simulate the trajectories and speeds of boats and to determine the maximum size that can navigate without but also to specify the facilities that would and also to specify the developments that would allow to increase the maximum permissible gauge.

## CLIENT/PARTNER NEEDS

The establishment of the Olympic village on both sides of the of the main branch of the Seine upstream of the A86 (île Saint-Denis and the right bank of the main arm), will lead to totally prohibit the river navigation in this arm during the duration of the games. Part of the river traffic could be transferred to the secondary arm, subject to restrictions as regards gauge and conditions of crossing, taking into account its weak capacities. The objective of the study is to determine what is the maximum size that can receive the secondary arm (length, width, air draft), without making any consequent developments. A second scenario will be studied to specify which developments would allow to increase the maximum admissible gauge by dredging in order to increase the water level gauge or the draught.

## CEREMA'S SOLUTION

To carry out manoeuvrability studies, Cerema uses the Navmer software developed by the Directorate of Cerema Water, Sea and Rivers. This software calculates the forces on a ship from its characteristics, the pilot's orders, the site, the wind and the current. The orders (helm, engine), transmitted via the software interface allow the simulated ship to move. The results (trajectory, speed) and orders are saved, compared, analyzed and edited.

Cerema was therefore responsible for building the simulation program by setting the parameters of the software (hydraulic conditions, navigation rules, wind, ...). A session of simulations were then carried out with experienced navigators (Cemex and Compagnie Fluviale de Transport). Simulations were performed on the two most critical areas defined during the route study: the head of the island and the construction and allowed to evaluate the conditions of of two barges and units of 110 and 135m.

## **CLIENT**

Regional and Interdepartmental Directorate of  
l'Équipement et de l'Aménagement Ile-de-  
France (DRIEA)  
75000 Paris

## **PROJECT PILOT**

Directorate of Cerema Water, Sea and Rivers  
Infrastructure and Transportation Department  
Transportation Division

## **SCHEDULE**

2017 - 2024