

Dredging and Environmental Sanitation of the Grand Canal Parc de Sceaux (Paris, France)



Financed by: Conseil General des Hauts de Seine, Direction de la Nature et des Paysages

Client: Conseil Général des Hauts de Seine, Direction de la Nature et des Paysages (Directorate General of the Upper Seine)

Date: 2003 – 2006

Budget: € 73 000

Location: Parc de Sceaux, France

Partners: Excipe

Assignment:

The Conseil Général des Hauts de Seine (Directorate General of the Upper Seine) awarded Soresma-haecon for expert consultancy services for dredging works and environmental sanitation of the recreational site "Parc de Sceaux", near Paris. Within the consultant group Soresma-haecon was responsible for the technical design, general supervision and follow-up of the field works.

Scope of Services:

- Inventory of locally applicable dredging techniques
- Technical design of dredging and sanitation works
- Tender preparations for execution of dredging works
- Bathymetric and sedimentological survey
- Technical assistance to the Competent Authority
- Work supervision and quality control
- Water management plan, including monitoring of water quality.

Technical Description:

The "Parc de Sceaux " is a park of 180 ha, created in the XV century. It consists of a castle and typical French Gardens surrounding the Grand Canal (constructed in the XVII century). Nowadays, it is a protected cultural heritage and a popular recreational area. The park is located in Île-de-France (Paris) and along the Upper Seine River. The Grand Canal consists of a main channel (1000 m long and 50 m wide) which is connected to an octagonally shaped basin (the Octogone, 180 m by 120 m).



Parc de Sceaux

As the Grand Canal has not been cleaned for 25 years, about 43 000 m³ of (polluted) sediments had to be dredged. The sediments are composed of dehydrated sediments, sand sediments and organic residues.

After a preliminary bathymetric and environmental survey, it was our task to elaborate an appropriate technical dredging design and the associated tender documents. Thereby following requirements had to be taken into account:



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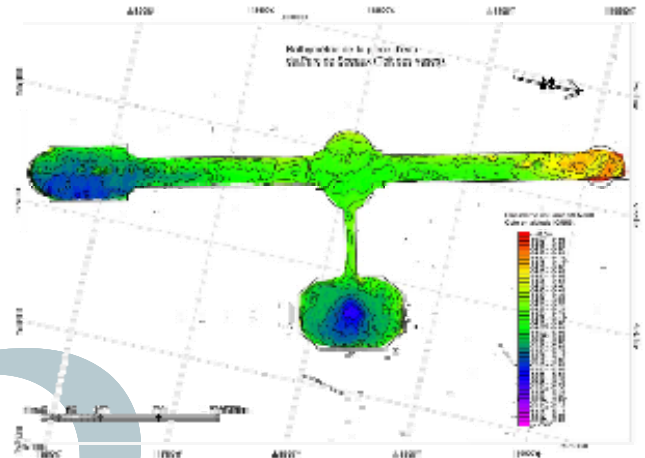
- 1) minimal damage to the environment (ecological vulnerable park)
- 2) minimal nuisance by odour, noise and visual pollution (recreation is the main current activity).

The used dredging technique was the hydraulic clean up technique where a small barge equipped with a cutter suction head pumped the sediments to an operation plant. Consequently, sediments were separated into its different fractions and transported to dumping sites (if polluted) or quarries (not polluted).



Dredging techniques in place

By continuous monitoring the bathymetrical state of the channel and the basin is checked during execution of the "cleaning" project.



Bathymetric Map – Top of sediment layer

Finally, a management plan to minimize future sedimentation and pollution by means of a monitoring system is set up.