

Paris - Louvre Museum Construction of four pumping stations



Country
France (Paris)

Client
Musée du Louvre

Date
2009-2011

Cost of works
€3.2m excl. VAT

Sogreah's services
▶ Full project management including an OPC assignment.



Context

The private sewerage network in the Louvre Museum consists mainly of combined type facilities that are mostly accessible for inspection.

The network discharges into the Paris public sewerage network at several points, along the Tuileries trunk sewer and the Rivoli trunk sewer.

If these public trunk sewers are overloaded, gravity flow is no longer possible, which in turn causes an overload of the private

network itself.

In these conditions, there are serious risks of the private network overflowing into the lower parts of the Louvre Museum, causing much damage to equipment and the building.

This overload phenomenon could occur in the event of a 100-year flood of the Seine.

The considerable damage that could be caused by overflows from the Louvre Museum's private sewerage network led

the Louvre Museum authorities to launch a programme to install valves that will isolate the private network from the public one, and four pumping stations that will discharge wastewater towards the overloaded public trunk sewers.

This programme will be bolstered by development works in order to improve flow in the Louvre Museum's private sewerage network, in order to improve its flow.



Description of the project:

Preliminary studies have defined what works need to be carried out to protect the Louvre building from sewerage network overflow:

- Isolation of the private network from the public one by blocking off certain outlets or installing valves;
- Installation of four pumping stations to create pressurised flow towards the overloaded public sewerage system.
- Works on the existing private networks to increase flow (reshaping, discharge restoration).

Hydraulic modelling of the network with the CANOE software helped to define a pumping rate that would be sufficient to discharge a 10-year rainwater flow during a 100-year flood of the river Seine.

Works

- Installation of 7 valves on outlets to the public network.
- Some outlets to the public network will be blocked off.
- Construction of four pumping stations (pumping rates: 1.631 m³/s, 0.408 m³/s, 0.333 m³/s, 1.130 m³/s).

- Instrumentation.
- Power supply for the pumping stations and data collection by the Louvre Museum's automated system.
- Reshaping of the networks.

Constraints

- Little space in the basement.
- Poor knowledge of the existing networks.
- The site has a lot of visitors.