



## Saint-Cloud Great Waterfall Reinforcement and restoration

2020 - 2021



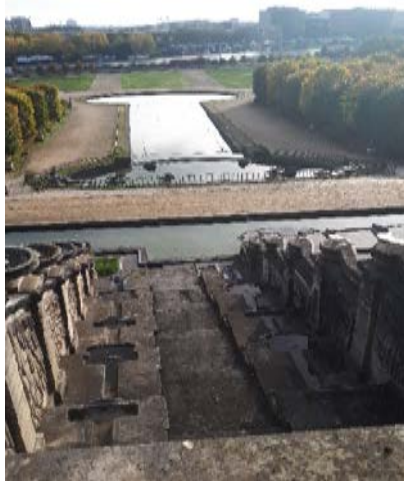
FRANCE – Saint-Cloud

Client

CENTRE MONUMENTS  
NATIONAUX

Terrasol's services  
fees

32 000 €



### The Project

The Centre des Monuments Nationaux has appointed Terrasol to take part in the reinforcement and restoration studies for the upper part of the Saint-Cloud Great Waterfall.

Amongst the fountains embellishing the 460 hectares of the Saint-Cloud National Park, a listed historical monument, the Great Waterfall runs over a length of approximately 200 metres with a drop of about 20 metres following the natural slope of the hillside down to the Seine.

After its creation in 1664 and 1665, the current structure of the Saint-Cloud Great Waterfall has suffered from stability problems since the end of its construction, with reworking and restoration works extending from 1692 to 1892.

### Our Services

In the geotechnical context of the Saint-Cloud hill which is known to be difficult, inclinometer instrumentation has been installed to measure any movements in the terrain, and has been completed by regular monitoring of piezometric levels.

This made it possible to carry out back-analysis calculations to adapt the reinforcement solutions that are required.

The calculations were performed with Talren v5 software, using the traditional slice method and the advanced slope stability analysis method (logarithmic spirals).

The Terrasol's assignment started with the definition of the ground investigations, and went on with the preliminary and design studies. We then provided technical assistance during the assessment of the contractors' tenders, and ensured supervision of the detailed design and of the works.

### Key features

- Definition of the ground investigations, preliminary and design studies;
- Technical assistance and supervision of the detailed design and of the works.