

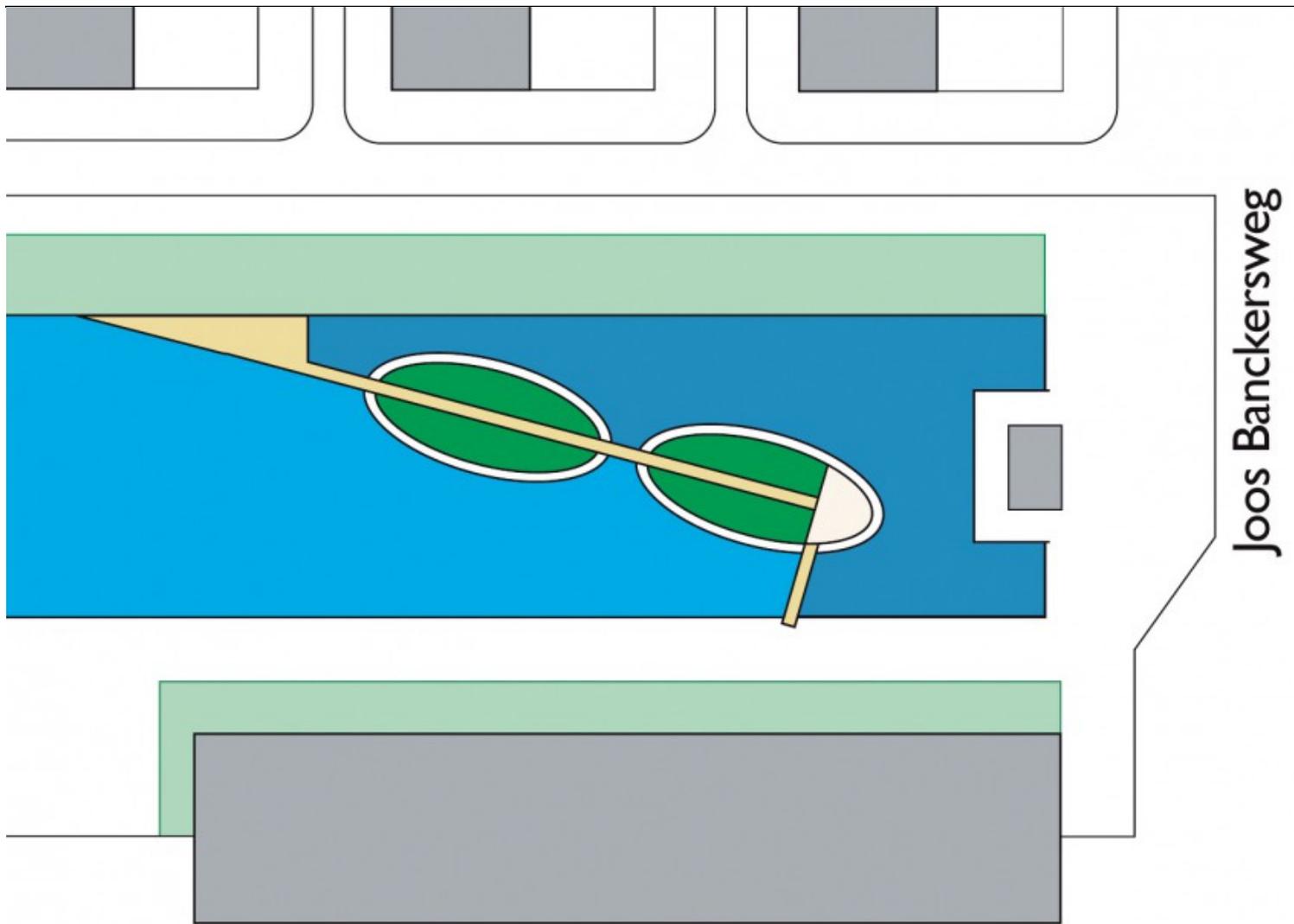
Helophyte filter on Erasmusgracht, Amsterdam



In Amsterdam, a decentralised alternative has been developed for an improved separate sewer system. That alternative is not only cheaper; the cleaner effluent means that it is also better.

In the project on Erasmusgracht, rainwater is discharged into a separate sedimentation reservoir in the canal, after which it passes through the helophyte filter. It is subsequently discharged into the canal. The pilot project shows that the effluent from the sedimentation reservoir alone is better than that of improved separate sewers. In the sedimentation section, suspended particles settle, with the heavy metals bound to them. The subsequent treatment in the helophyte filter further improves the quality of the effluent. The helophyte filter serves primarily to remove the organic nutrients nitrogen and phosphates from the water.

This decentralised facility has also proved itself to be considerably more efficient in terms of cost as well. In the same situation, realising improved separate sewers would be over 50% more expensive over a ten-year period.



Once the pilot period revealed the solution to be more attractive for both environmental and financial reasons than realising an improved separate sewer system, opMAAT created a design that is also open to locals. That design was completed in 2005.

The two oval helophyte filters seal the sedimentation reservoir off from Erasmusgracht. The helophyte filters are lined by rock-filled gabions. The helophyte filters are open to the public and a bench has been placed by them. A sign on the bank explains the purpose and workings of the system.

The conclusion is that using a helophyte filter with a sedimentation reservoir as a peripheral facility is also an attractive alternative financially. Another benefit of this system is that it is not necessary to break open a series of streets. The space required might present an objection, although this system in fact demonstrates that it is easy to incorporate aesthetically and so enhances the quality of the surrounding area. Realising only a sedimentation reservoir means that the costs and the space required can be reduced even further. [Dijk, 1999] [Pötz et al., 2009]