

Amsterdam Policy for large scale remediation sites

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Two major remediation projects

- Diemerzeedijk (1990-1998)
- Volgermeerpolder (2003-2011)

Amsterdam and location Diemerzeedijk



Volgermeerpolder

Diemerzeedijk

Diemerzeedijk (app. 1975)



Luchtfoto Diemerzeedijk sanering (1997)



Volgermeerpolder (2001)



Luchtfoto Volgermeerpolder sanering (2010)

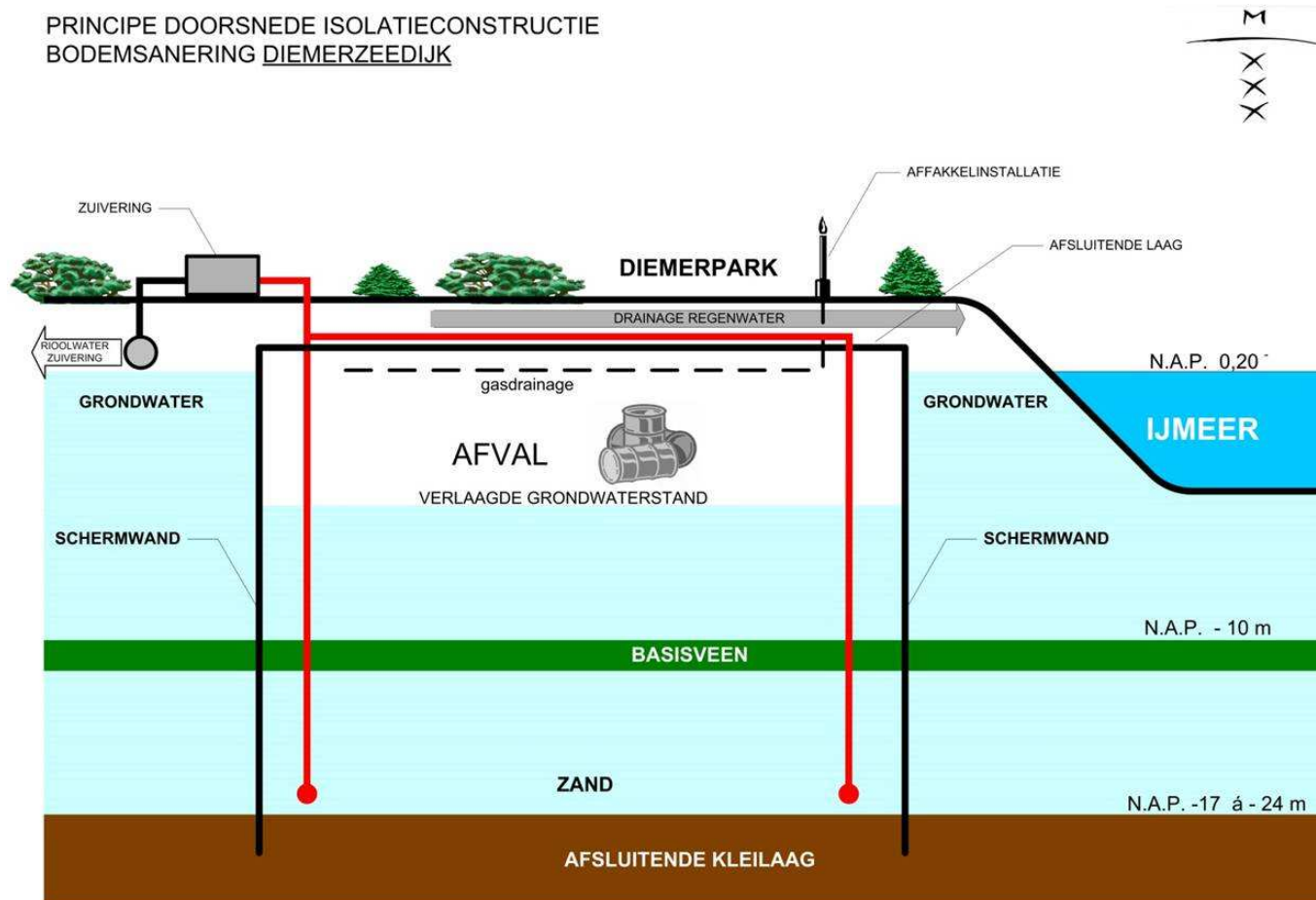


Diemerzeedijk

- Surface 51 ha
- Isolation, consolidation and Control
- Time schedule: IJburg
- Investment € 98 million
- Investment € 1.900.000 / ha
- Operation & Maintenance € 1.2 million/year

cross section Diemerzeedijk: boxing method

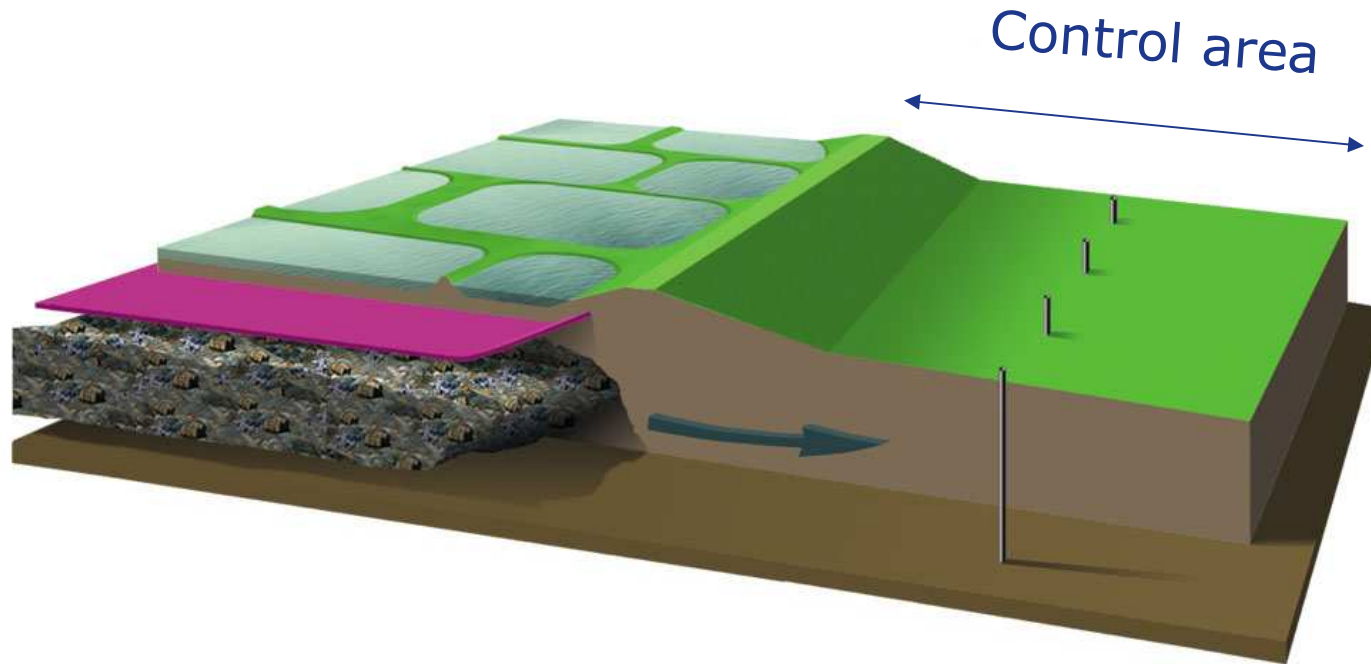
PRINCIPE DOORSNEDE ISOLATIECONSTRUCTIE
BODEMSANERING DIEMERZEEDIJK



Volgermeerpolder

- Surface 100 ha
- Isolation/Eco option
- Investment € 94 million
- Investment € 1.000.000 / ha
- Operations & Maintenance € 0.5 – 1 mjn/year

Cross section Volgermeerpolder with control area!



Volgermeer with control area



Different approach of the chemical dumps

Diemerzeedijk

boxing method
constructed walls
active water treatment
(during construction)

maintenance:
wells, wall, cap replacement
monitoring

Volgermeer

capping
use of 'natural wall' (peat)
no water treatment
(natural)

No replacement Cap
Lawn mowing
peat growth
monitoring (and if necessary
interception)

Sustainability

- Groundwater control and treatment
- Maintenance of the capping
- Use of the rehabilitated area (ecological value)
- Carbon footprint of the project
- Sweet Water storage capacity
(ca. 600.000 m³)

Risks during the project

- Emission of toxic pollutant in the air (Diemerzeedijk)
- Isolation of the water ways (Volgermeerpolder)
- Availability of “second hand” material in combination with the time schedule
- Legal aspects of the use of “second hand” material
- Logistics (transport: by boat, by pipe, by truck)

Governance

- Public private partnership
(Diemerzeedijk) General Contractor
(design and built)
- More traditional setting
(Volgermeerpolder) City-Engineers
Contractors

Public Involvement

- Participation
- Communication
- Compensation

Key factors for Success

1. Don't start too early (before you know what you want)
2. Avoid changes in the design during construction
3. Arrange participation before you start
4. Make a sharp risk analysis
5. Invest in co-operation with public enforcement

Key factors for Success

6. Create a planning and control system based on detailed budgeting
7. Take care for a reasonable budget
“Unforeseen”
8. Be sure the contractor can go on all the time
9. Be sure of an excellent Communication
10. Select the best team

Result

The projects Diemerzeedijk and Volgermeerpolder were successful in time and within budget