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afsluitdijk

WWW.VISMIGRATIERIVIER.NL

Fish Migration River Afsluitdijk

Initiatiefnemers Vismigratierivier:



provincje fryslân
provincie fryslân



Rijksoverheid



De Vismigratierivier is financieel mogelijk gemaakt door:

Fish Migration River

Update status Fish Migration River

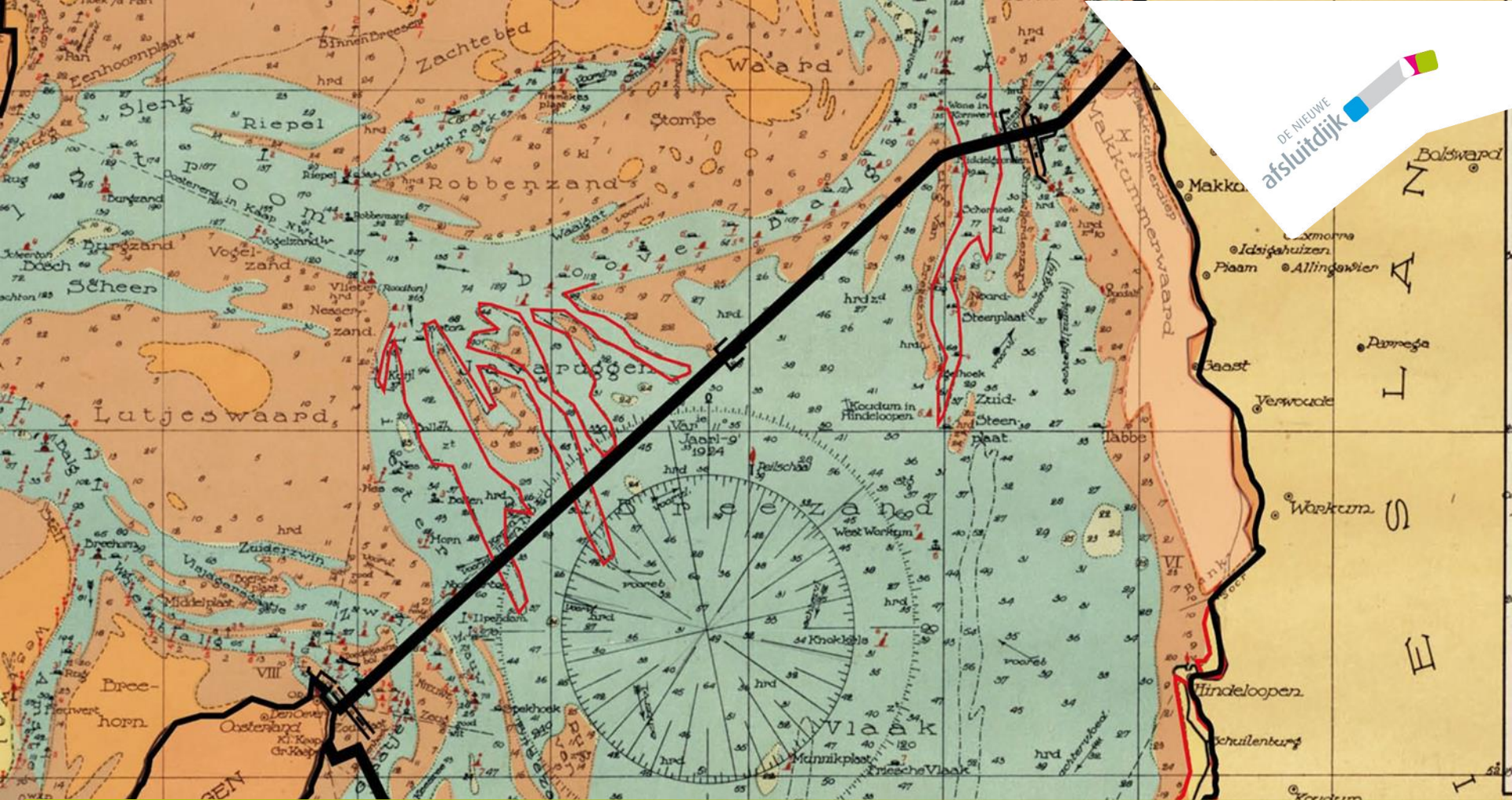
Wilco de Bruijne, on behalf of Provinsje Fryslân
September 2019

Optimizations

- Passability for fish
- Landscape quality
- Eco- engineering
- Interactions with renovation Afsluitdijk and Windpark

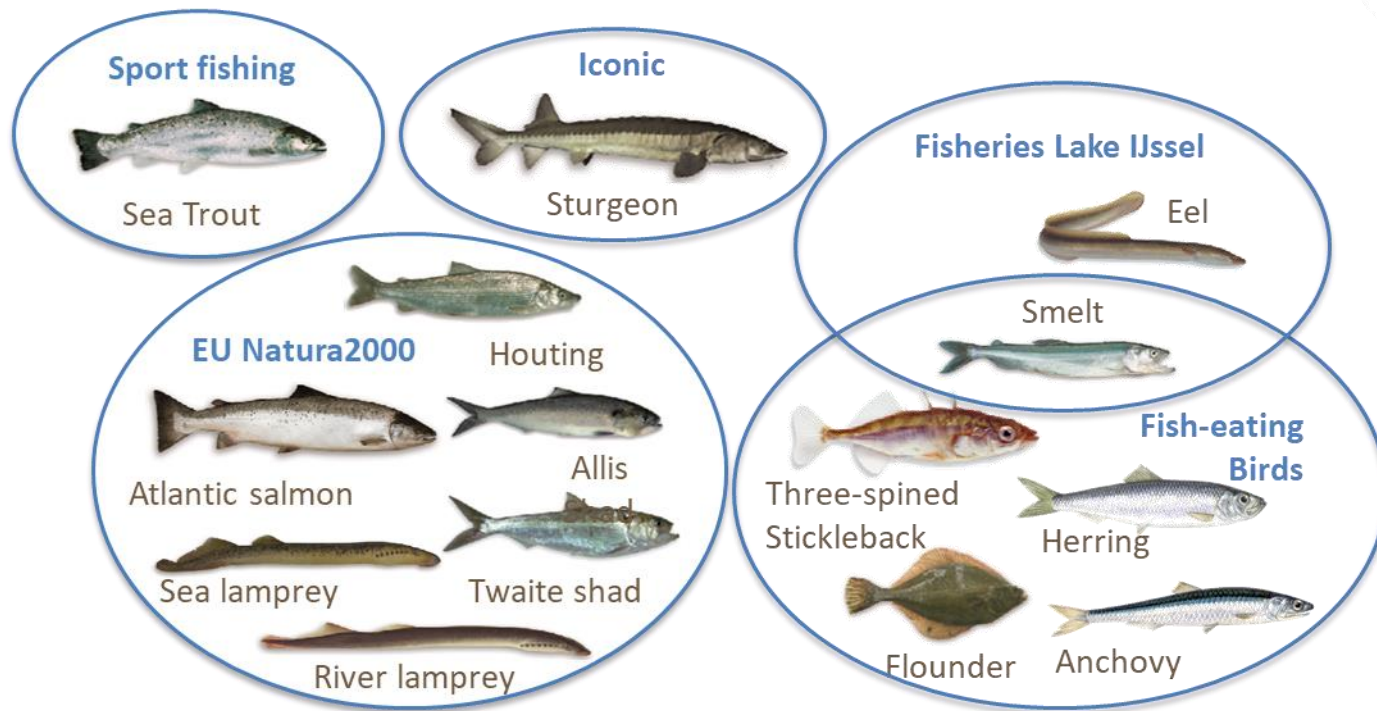
Design principles optimizations

- FUNCTIONALITY: Fish migration is function no. 1.
- LANDSCAPE: open water landscape, protective dam outside, soft sediments inside, kazematten.
- ECO-ENGINEERING: building with nature, local material, circulair, simple and clear design.
- RECREATION: Open acces, wander routes
- MAINTENANCE: Design limits interference as much as possible.
- COOPERATION: Interaction whit surrounding projects.



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Location of Afsluitdijk in Zuiderzee





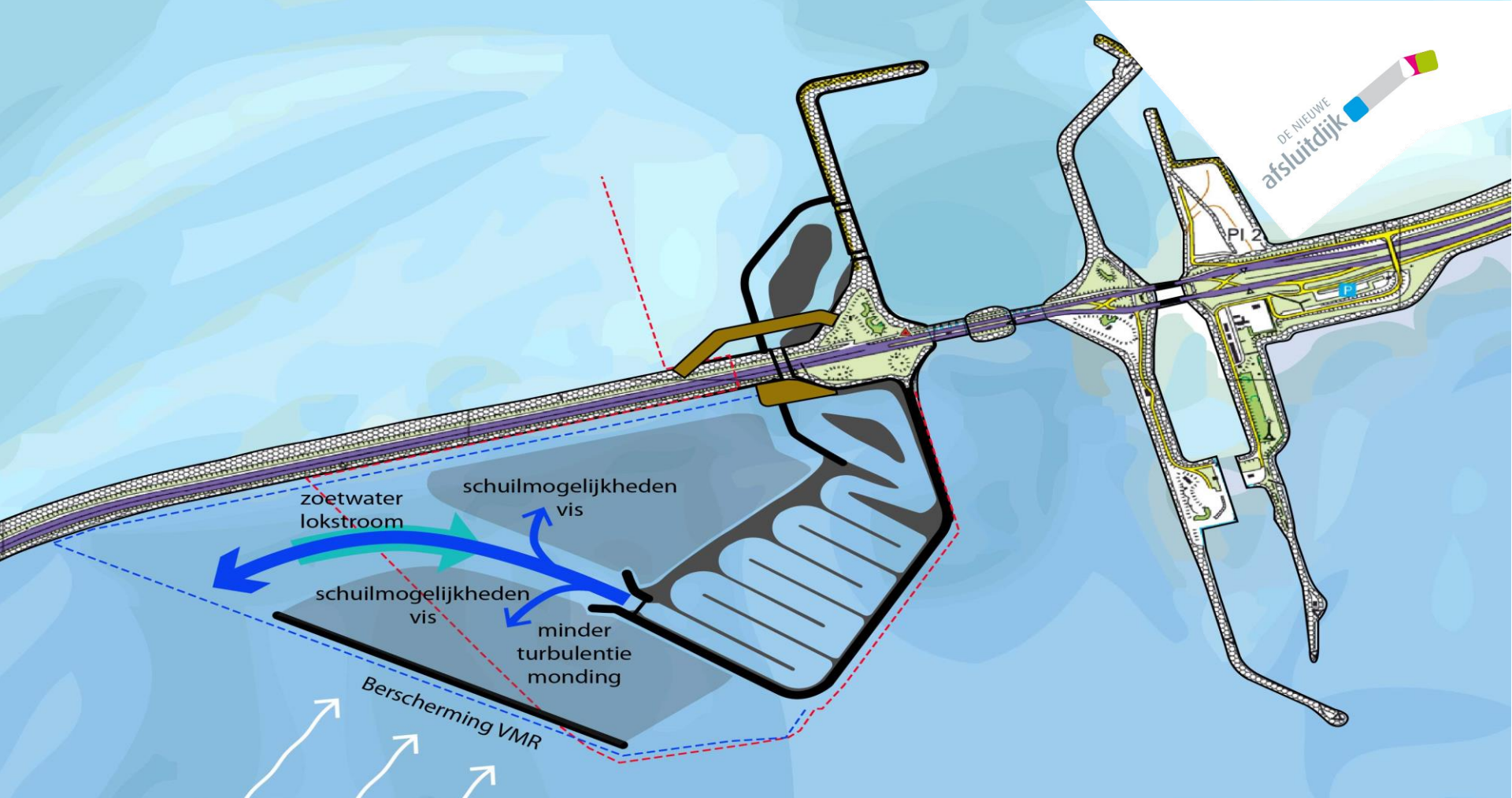
The Afsluitdijk: from Zuiderzee to IJsselmeer

Kornwerderzand: current situation

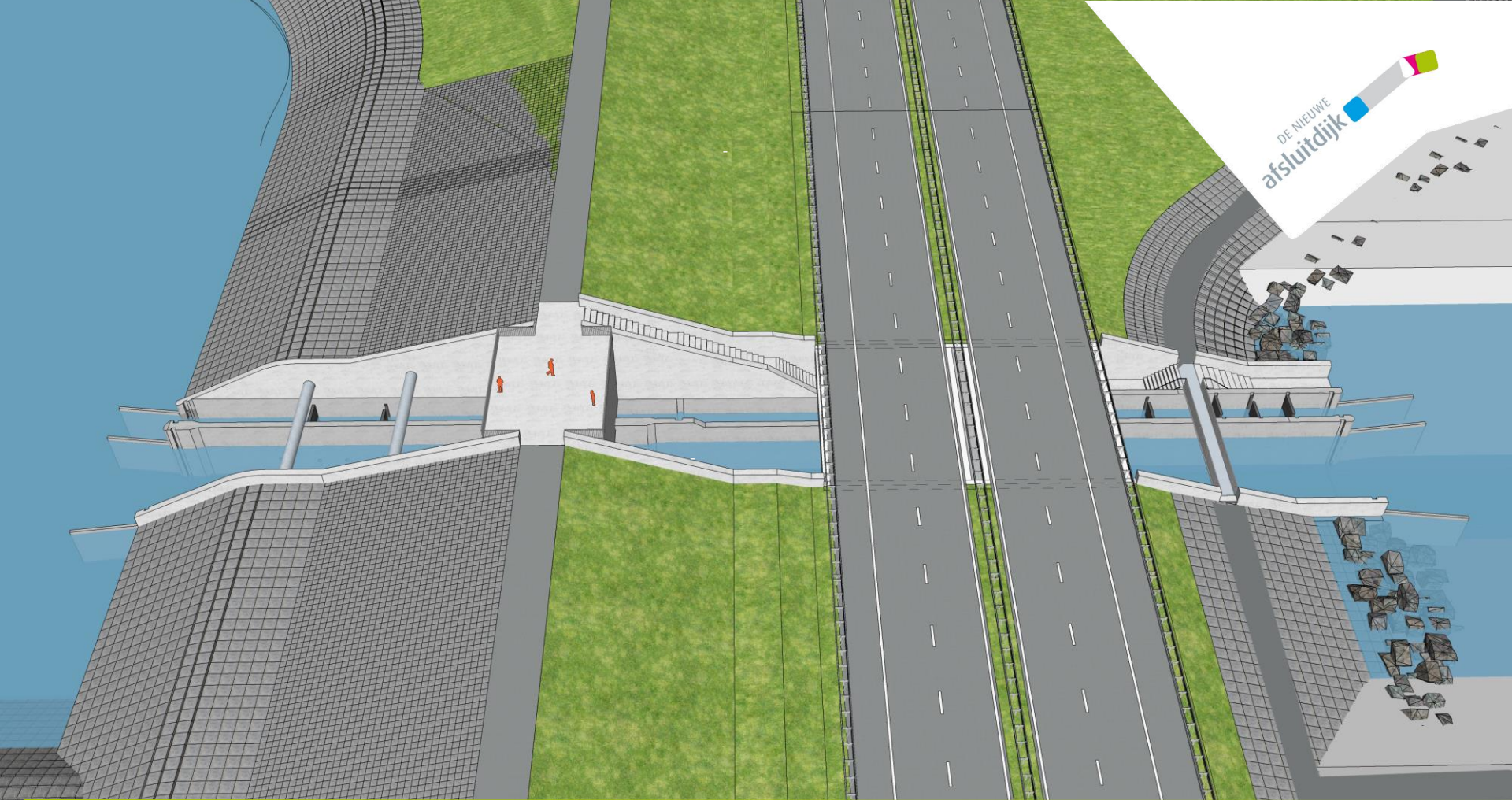
Kornwerderzand: situation after construction FMR



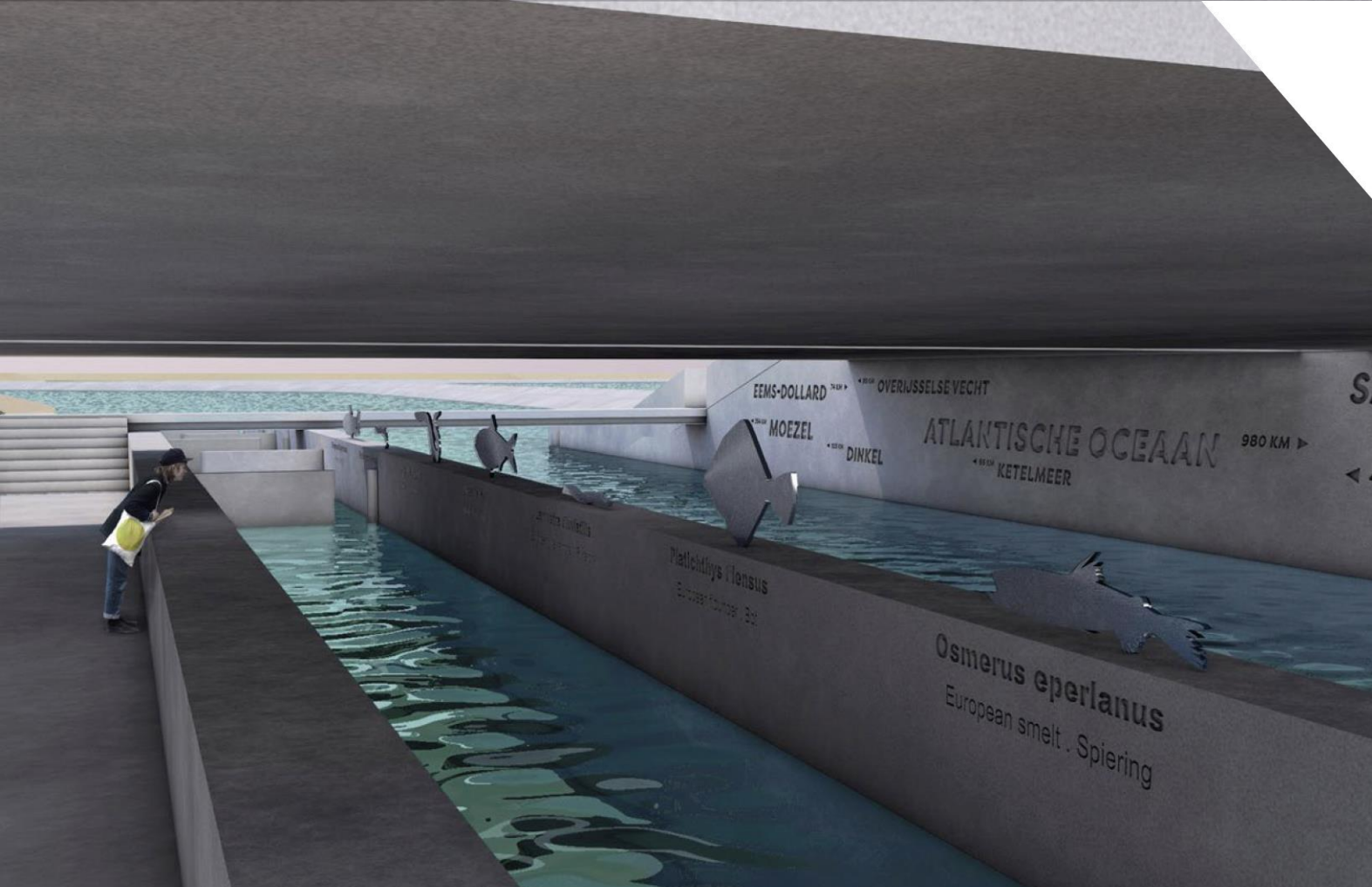
Restoration Swimway Waddenzee – River Rhine, connect to former gully



Construction of shallow zones with vegetation as refuge



Hole in the dike (Coupure) in contract of renovation Afsluitdijk

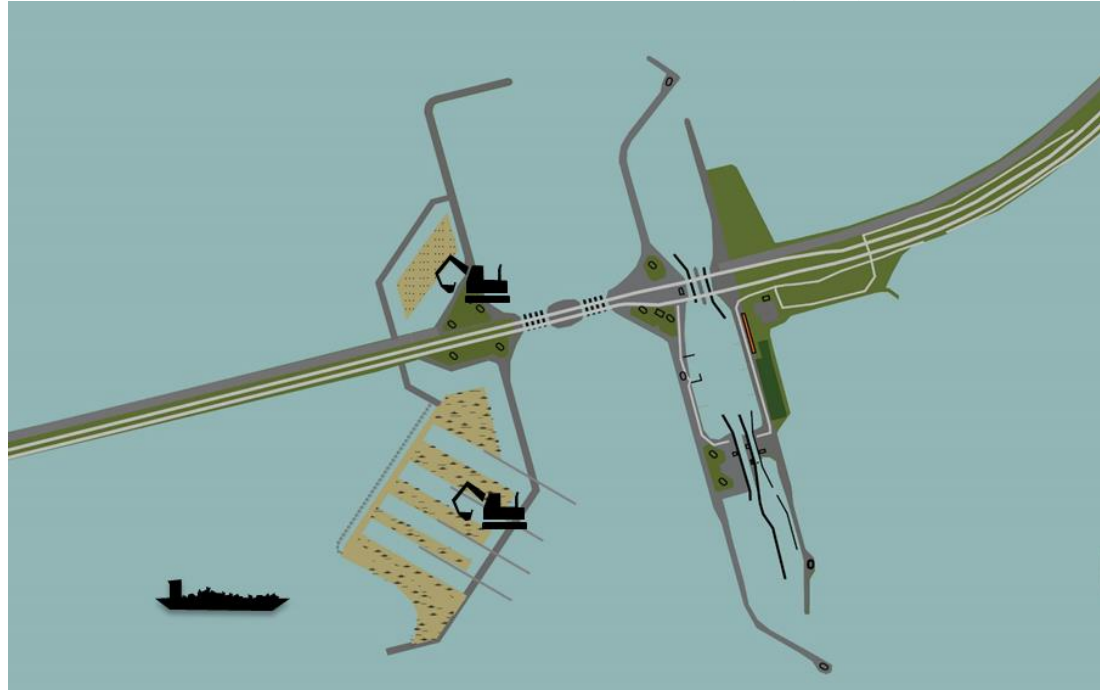


Experience fish migration in coupure through Afsluitdijk

Two open entrances in stilling basin (spuikom), 15m wide.

Numbers

- 50 ha
- 4 kilometer
- 3 kilometer rivier
- 100m² wet surface
- 1,4 milion m³ sand
- 150.000.000 kg stones
- 90.000 m² geotextiel



Three zones and three structures

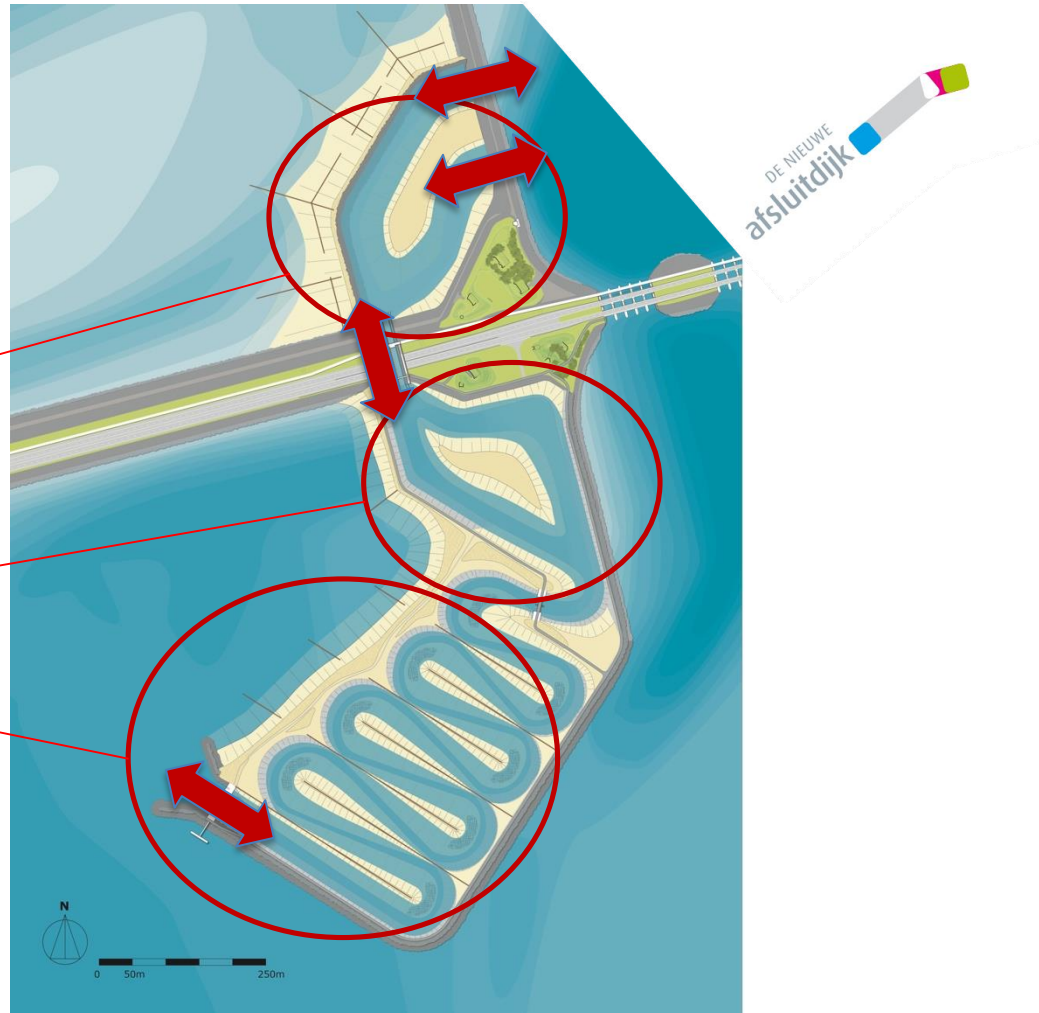
Wadden sea open connection (7 ha)

Ecopassage / coupure

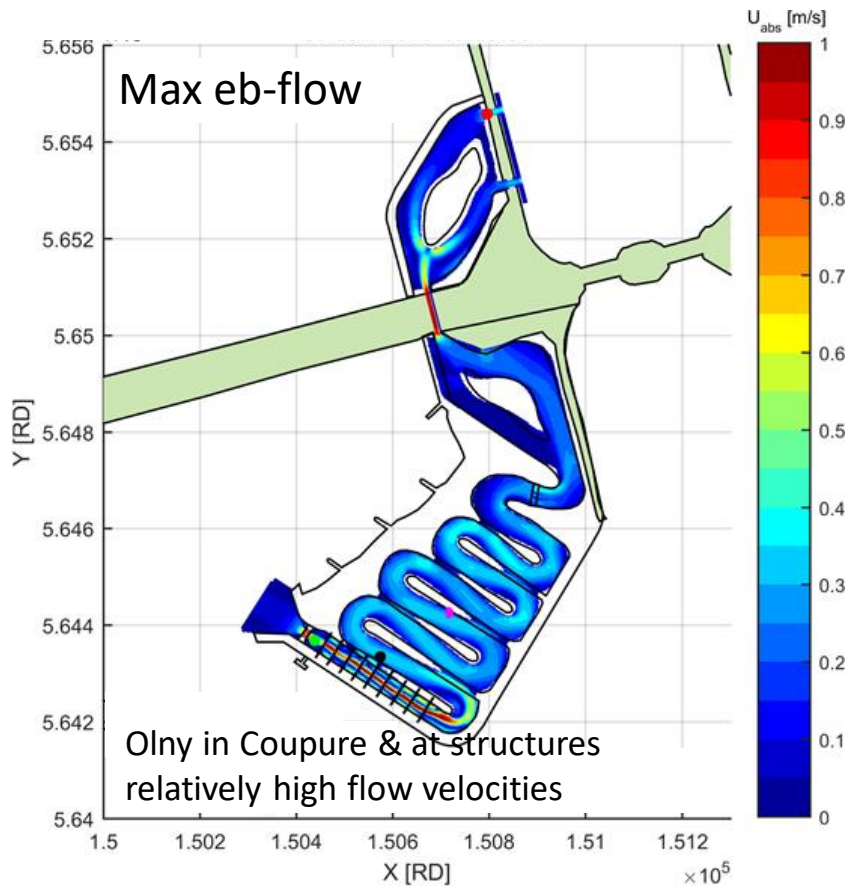
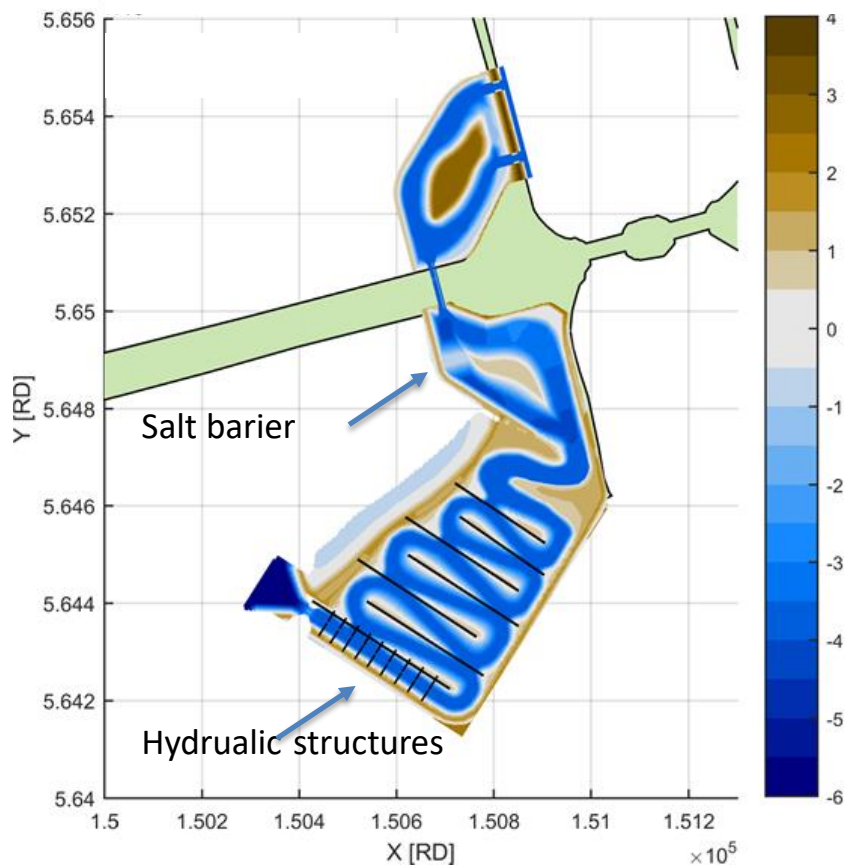
Estuarine zone IJsselmeer (5 ha)

Riverine zone IJsselmeer (35 ha)

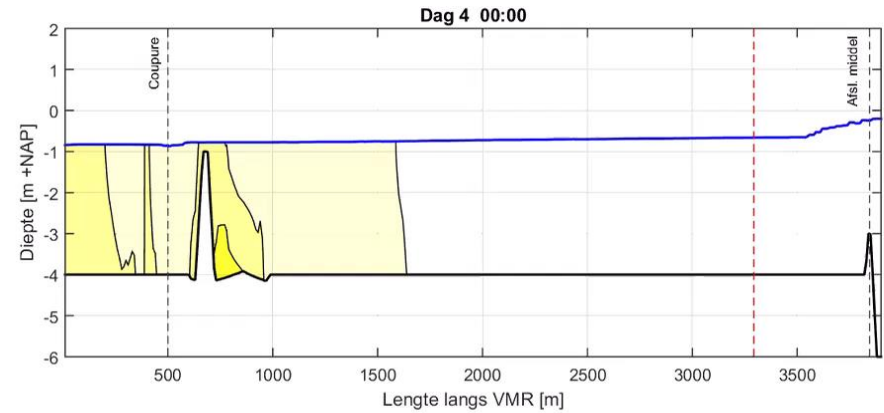
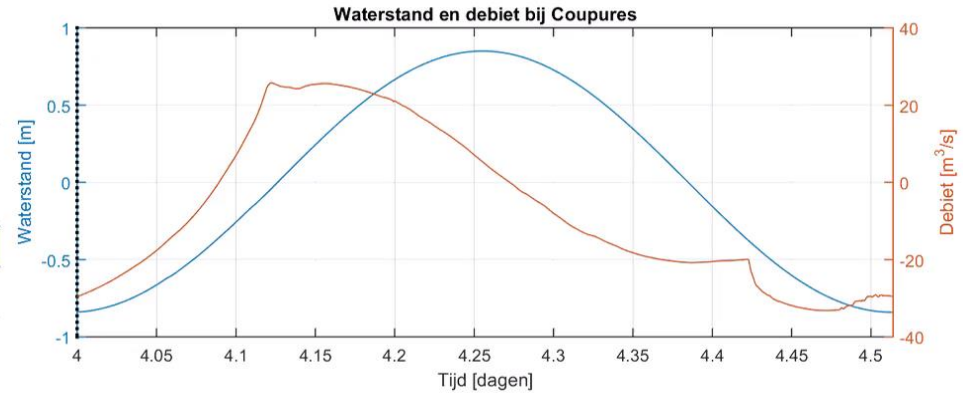
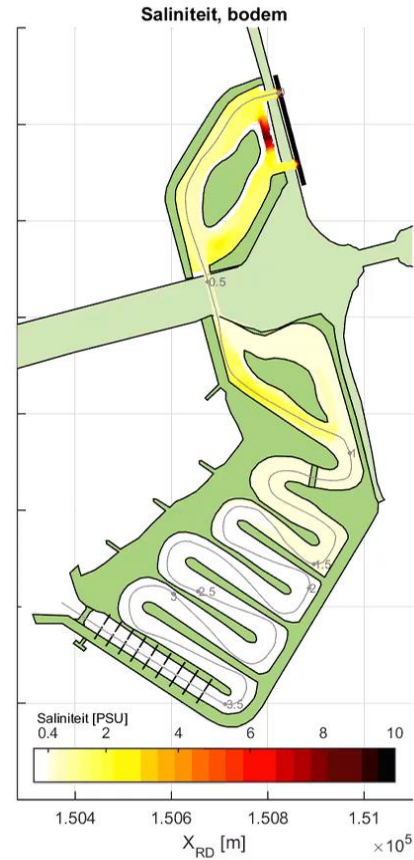
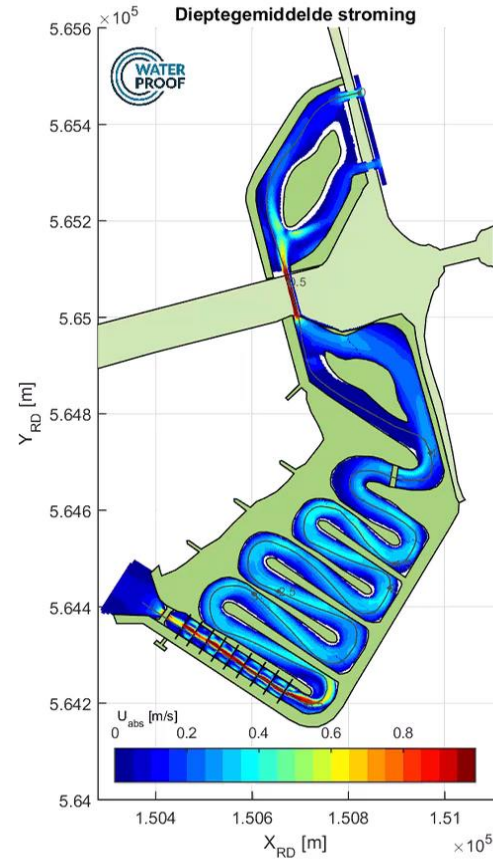
Management structure

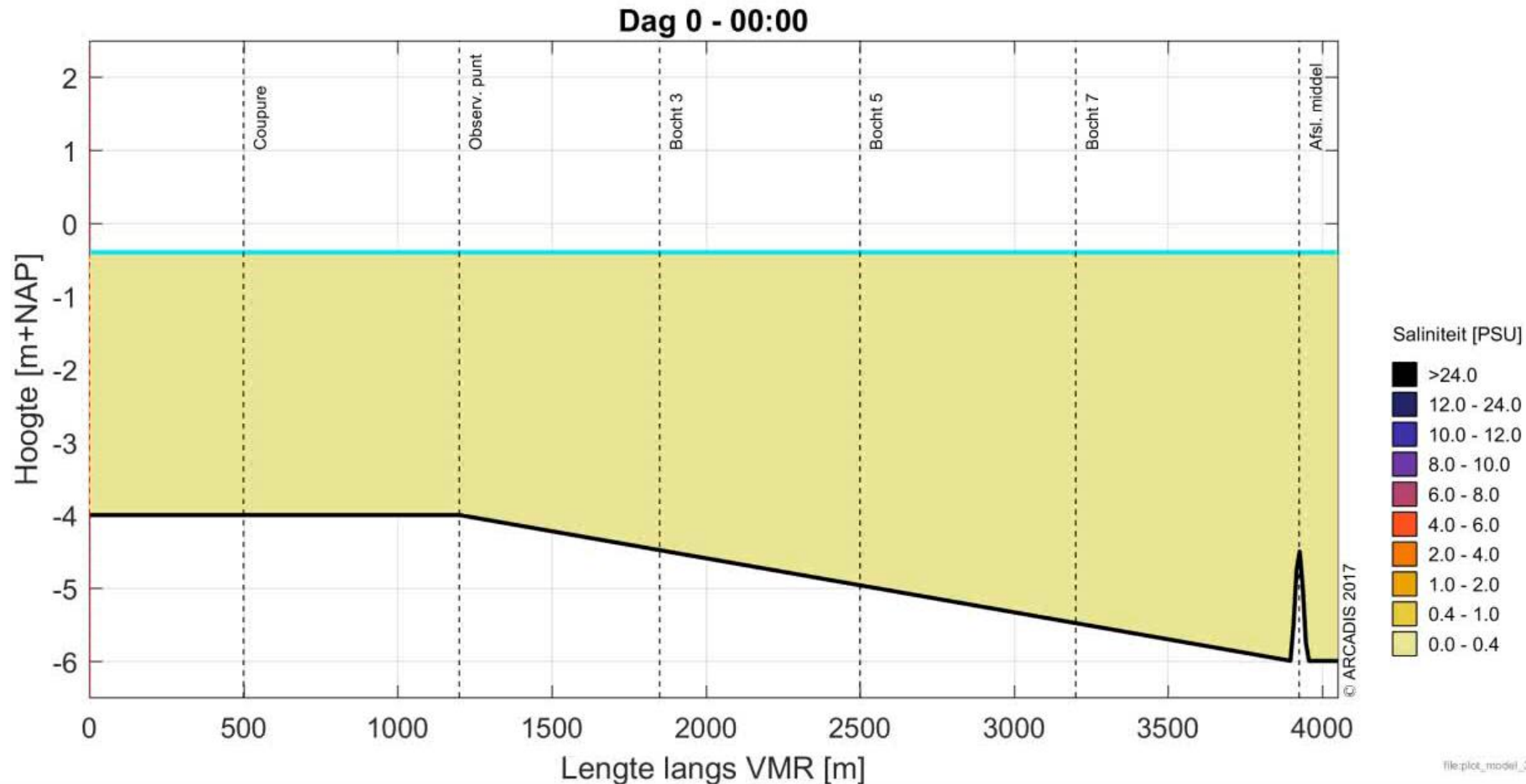


Hydraulic functioning



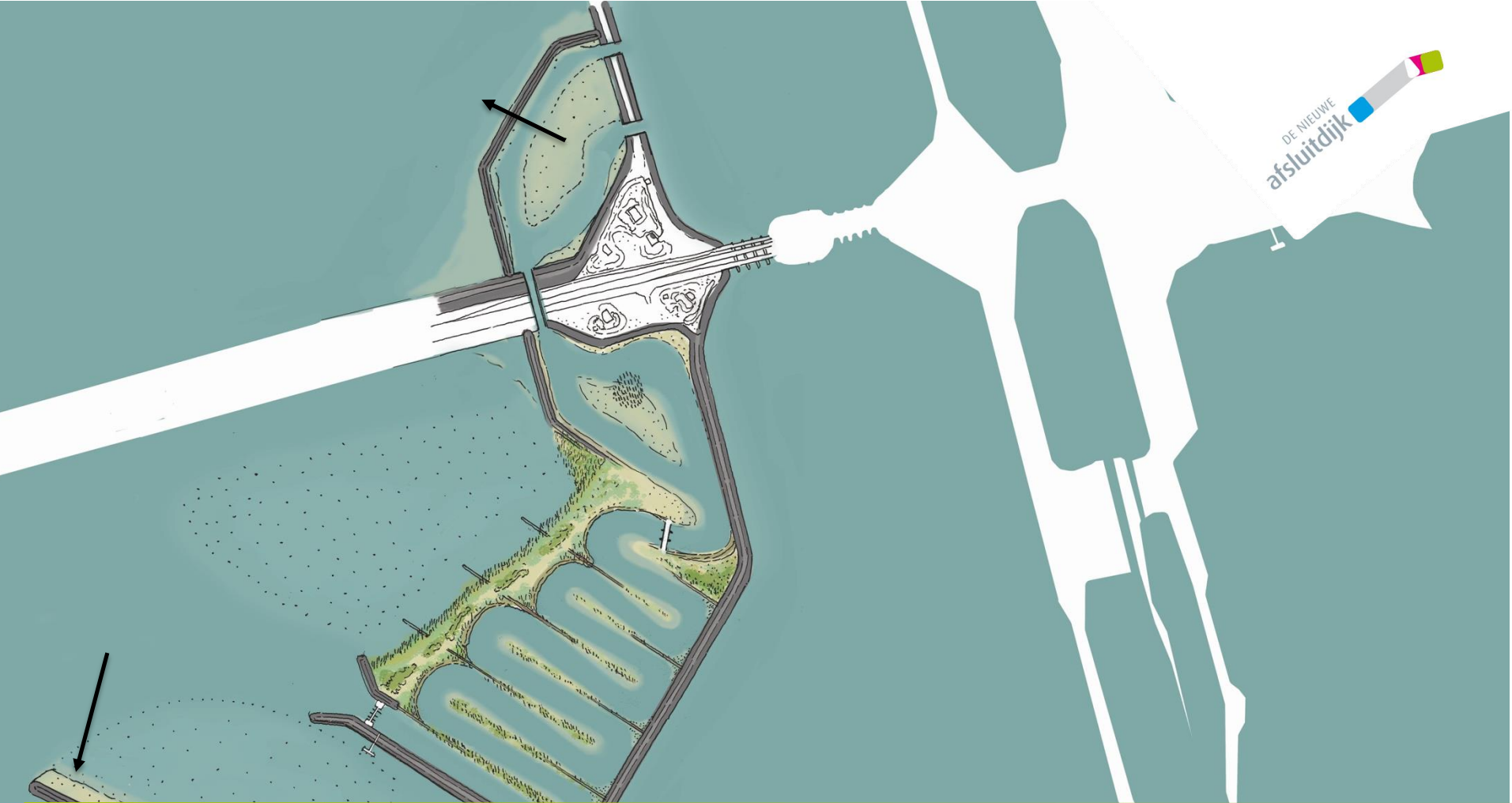
Flow velocity reduction measures in first section



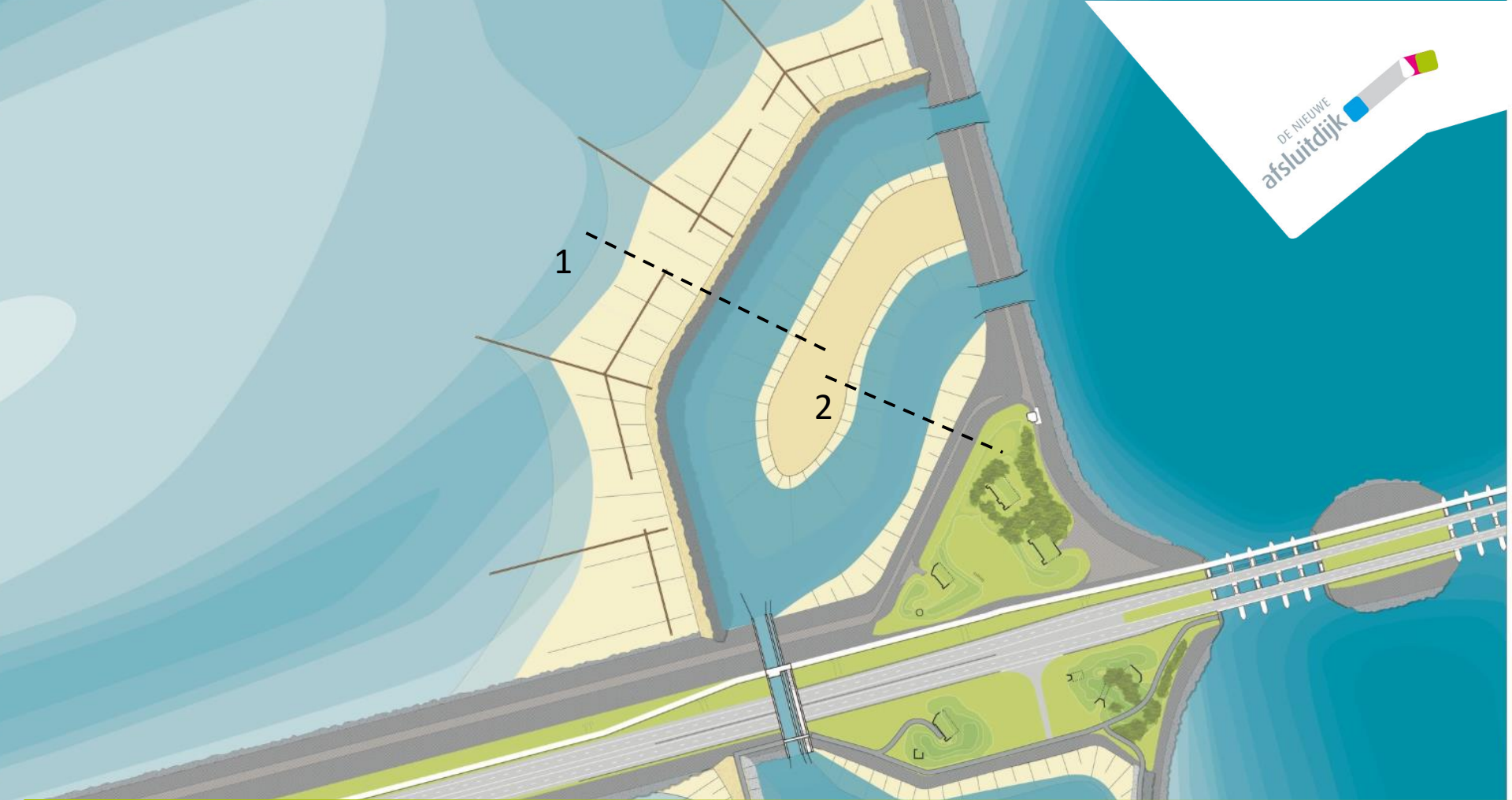


Recent optimizations

- Bird island
- Salt marshes
- Canal to river
- Intertidal area



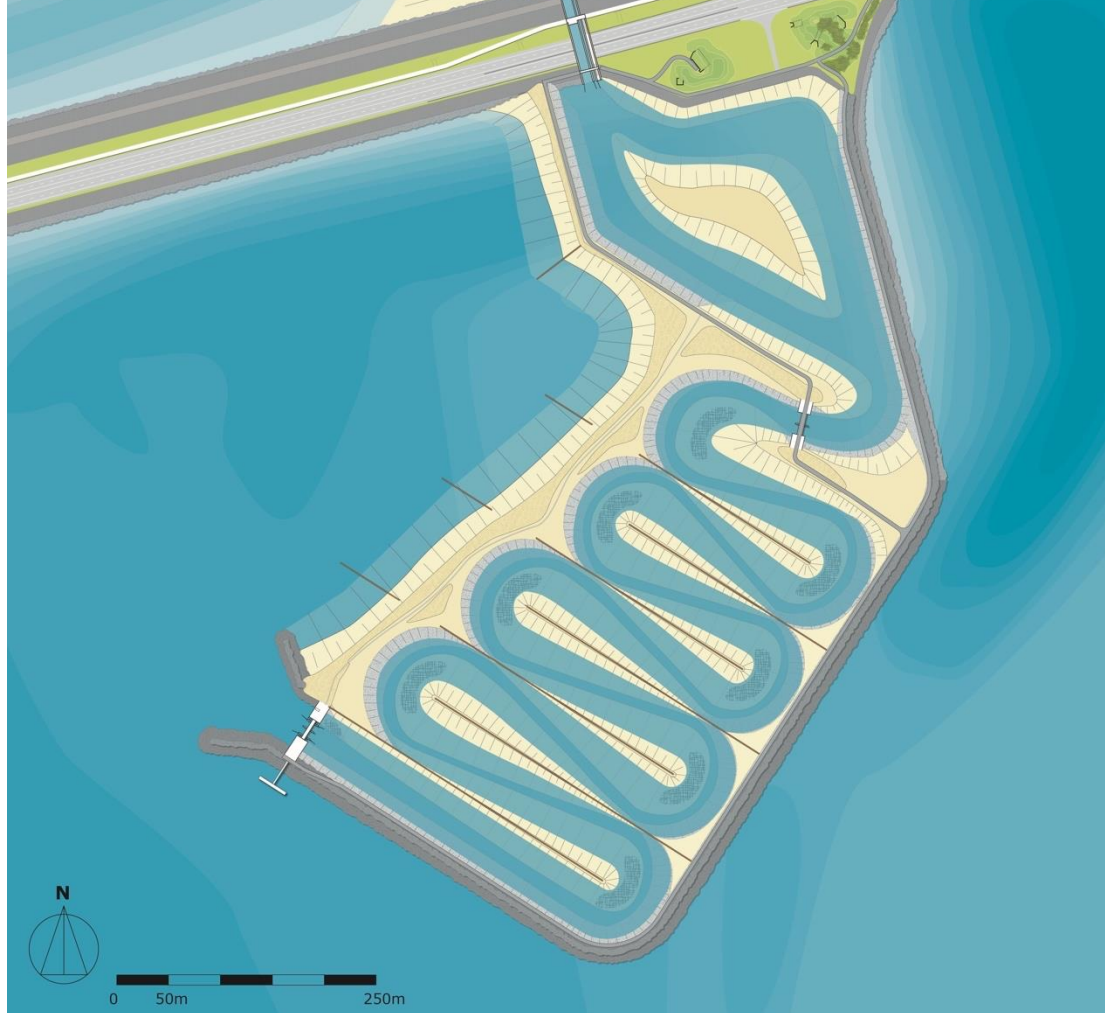
Bird island outside of projection FMR in Wadden Sea and in Lake IJssel



Salt marshes: Sandy sediments and hydraulic structures



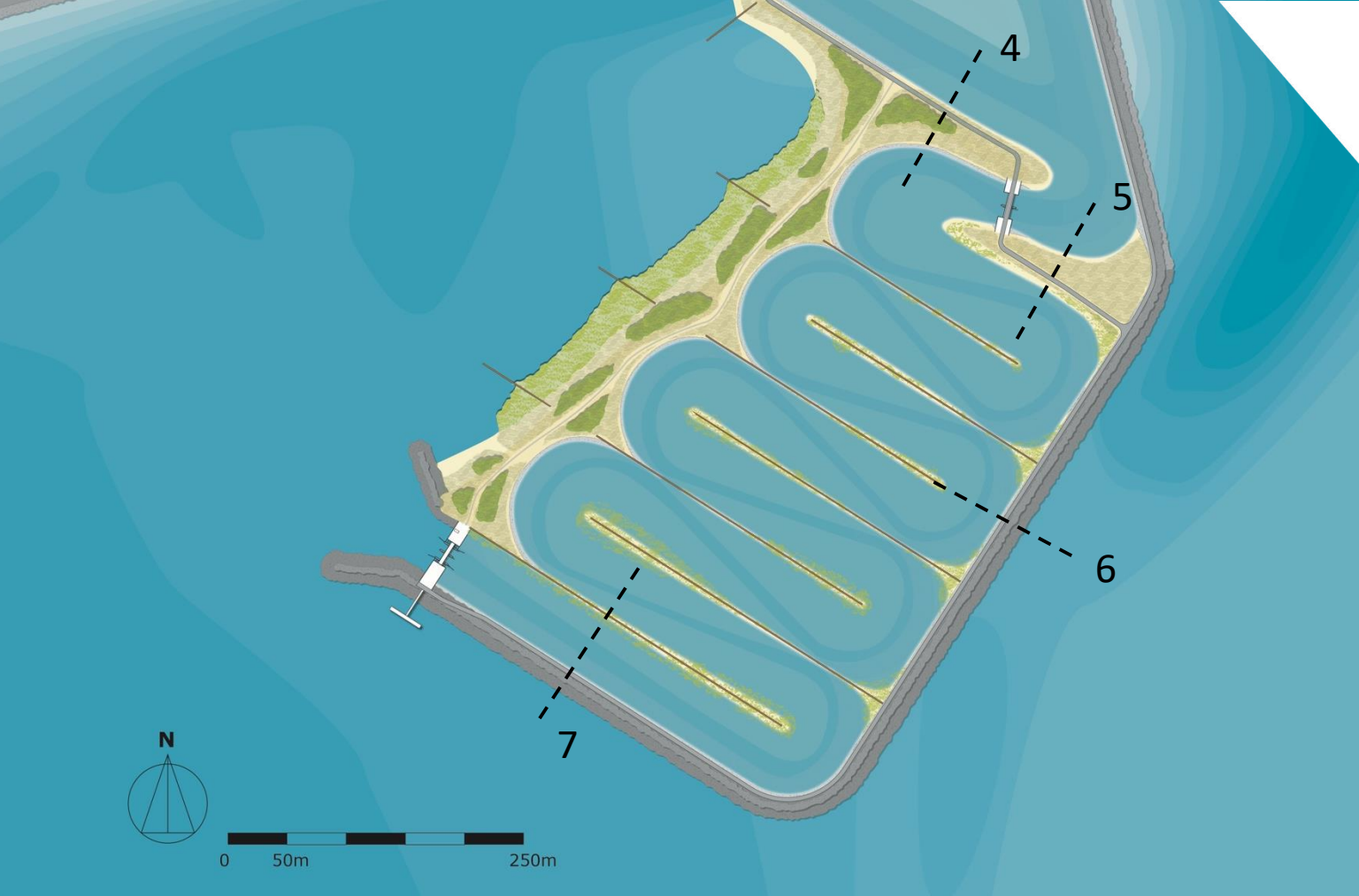




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Optimization river – more natural bends

More space for intertidal area



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More variation in profiles



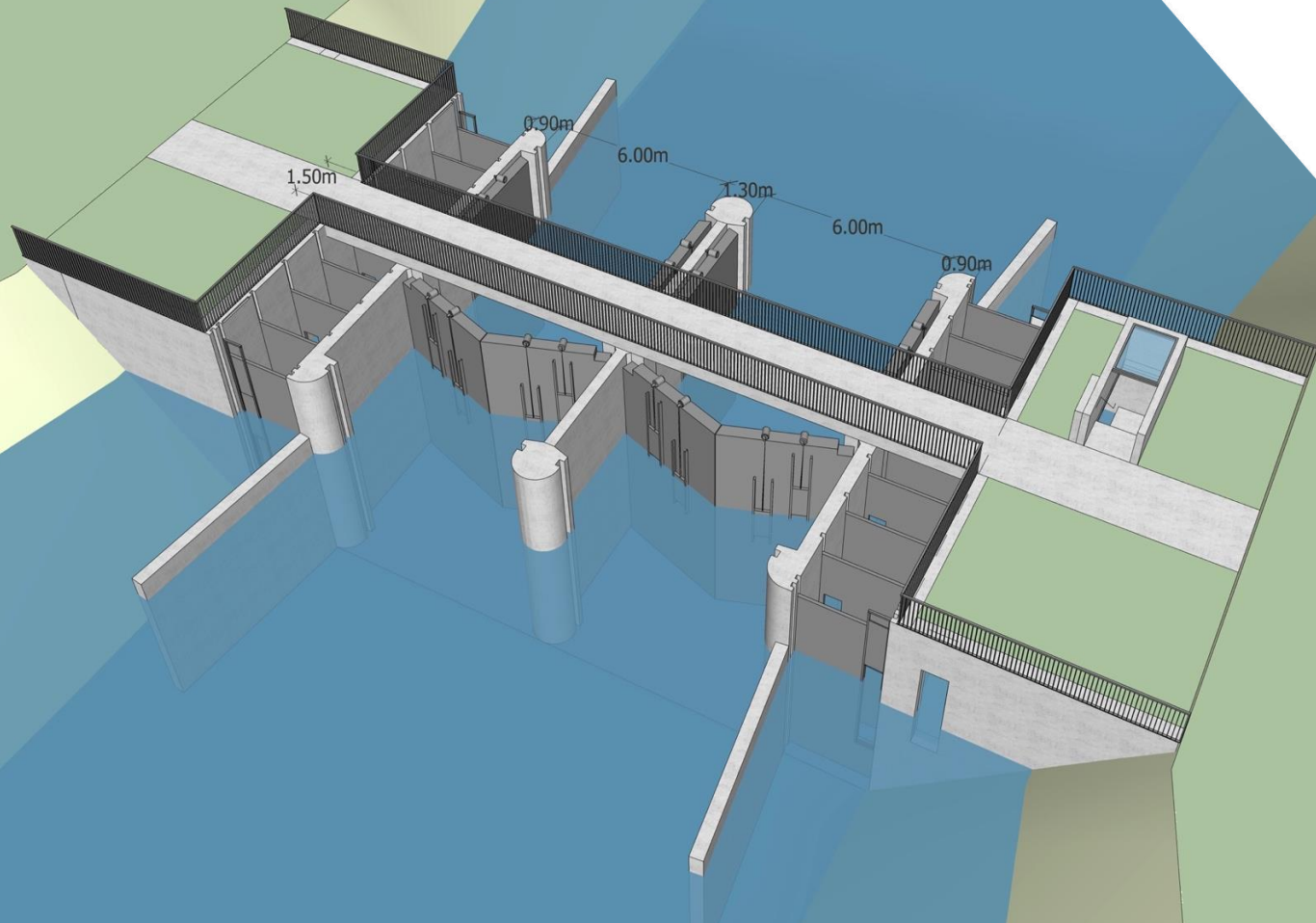
Sandy dam: More natural bank Lake IJssel side.



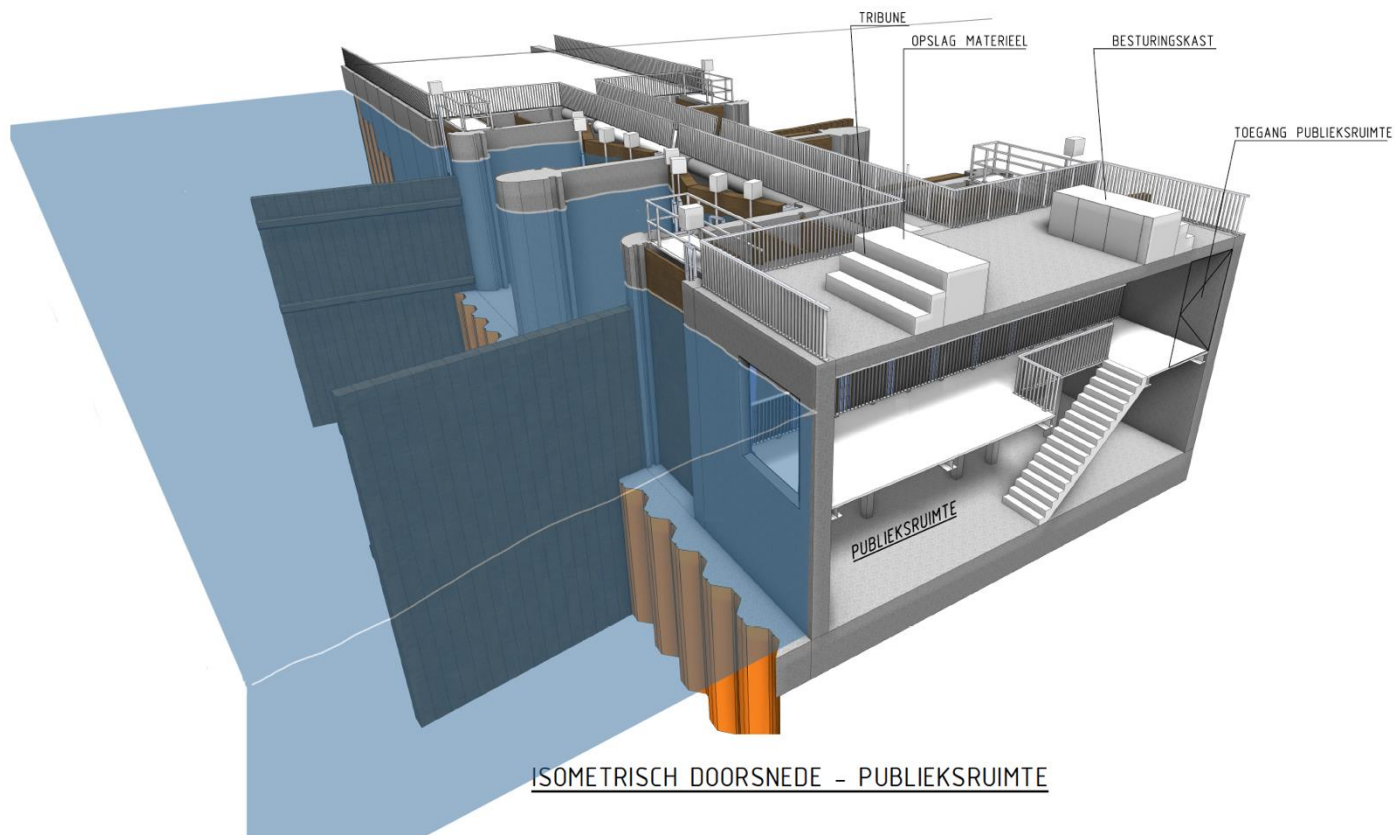
Hard outside dikes with maintenance and recreation path

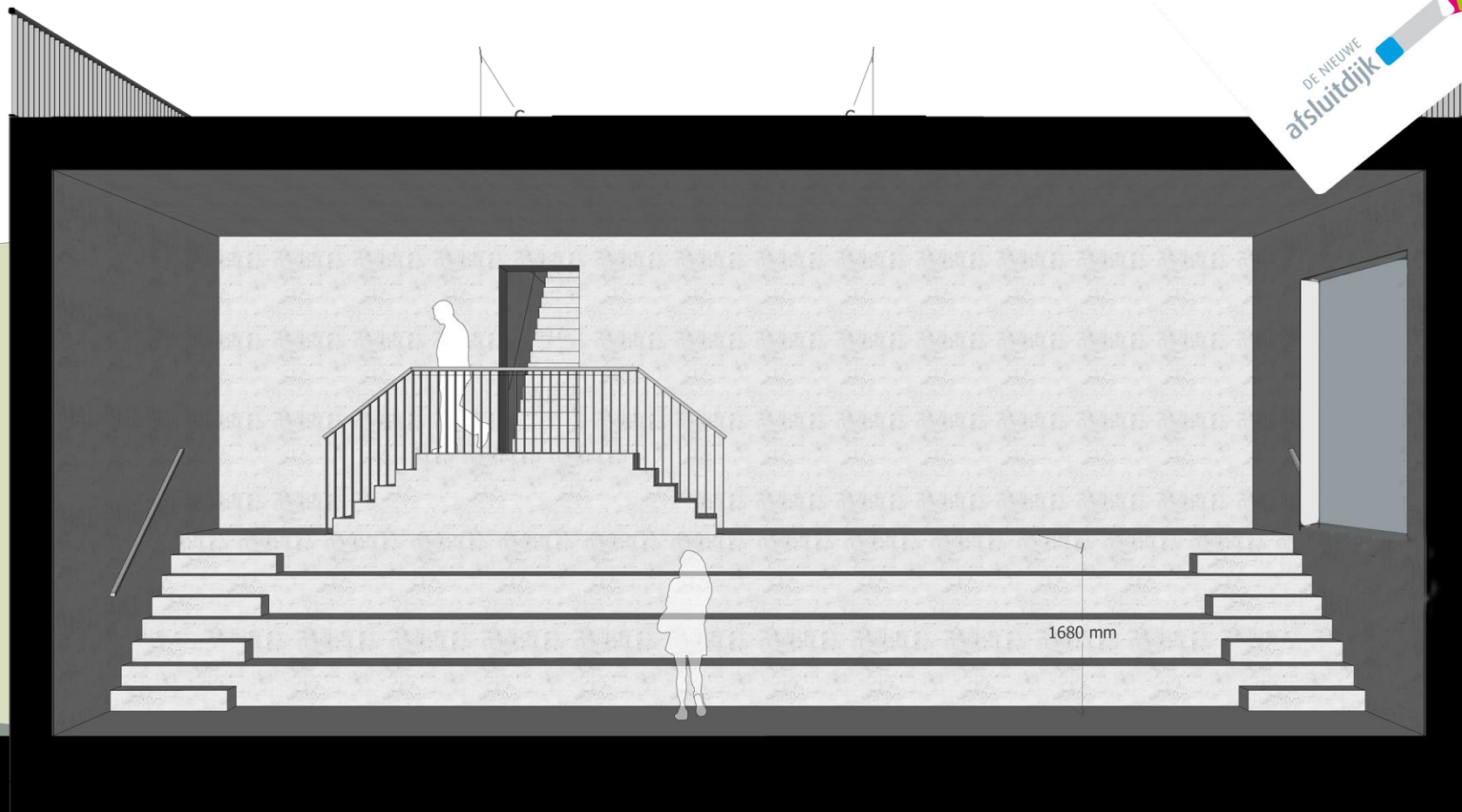


Design of hydraulic management structure (IJsselmeerzijde)



Open permeable gates and vertical slot fish passages







Planning

Interactions stakeholders January – October 2019



Tendering: December 2019 - June 2020



Construction: 2020 - 2023



Operational 2023 – 2050 – and on...



De Vismigratierivier is een project van:



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