

WATERBOUWKUNDIG LABORATORIUM

Lime treatment of levee cover

Ongoing research in Flanders and The Netherlands

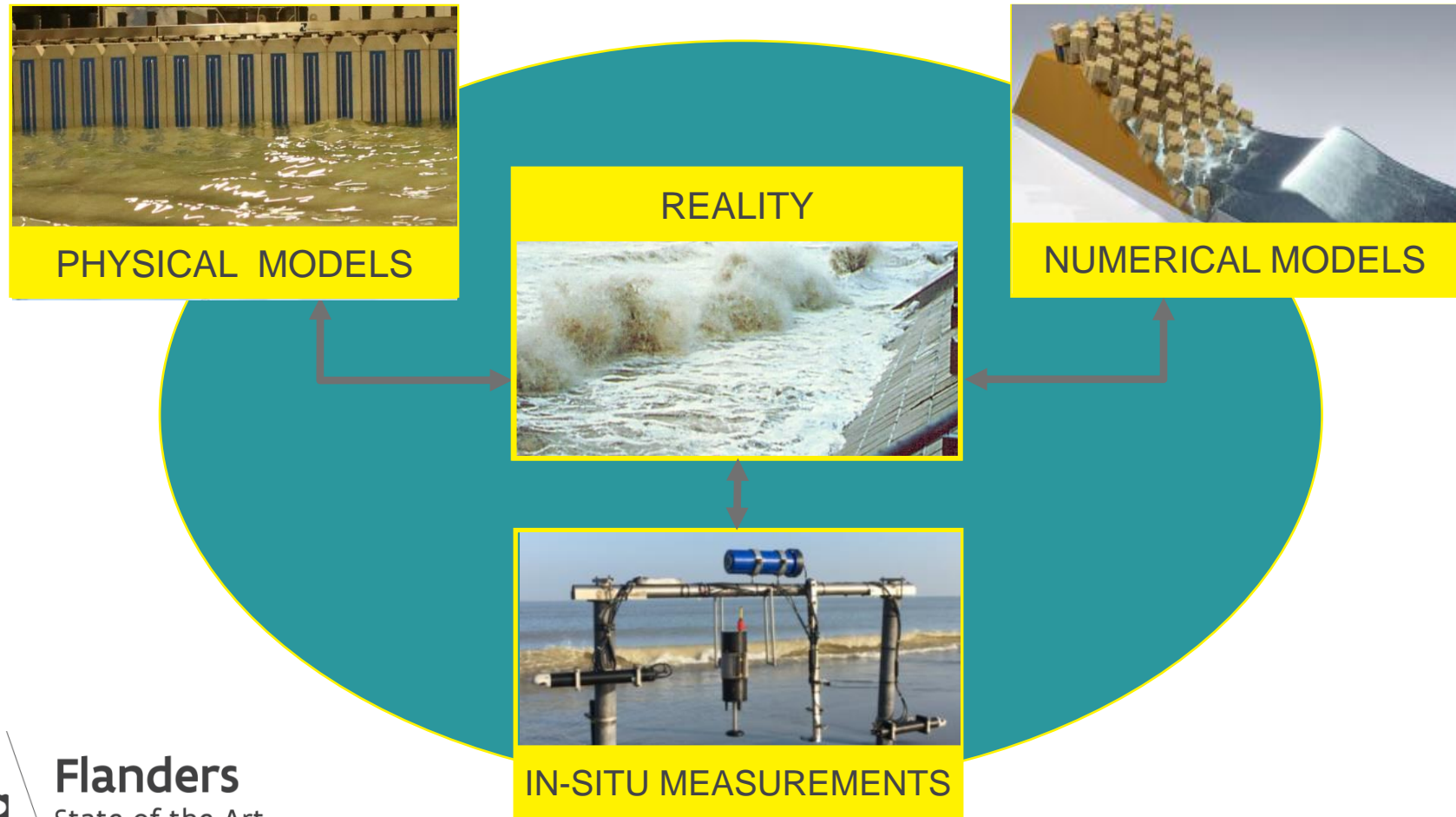
28/06/2022

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Flanders
State of the Art

Research at FHR





Flanders
State of the Art

Lime treatment of levee cover



Updated Sigmaplan

Verklaring



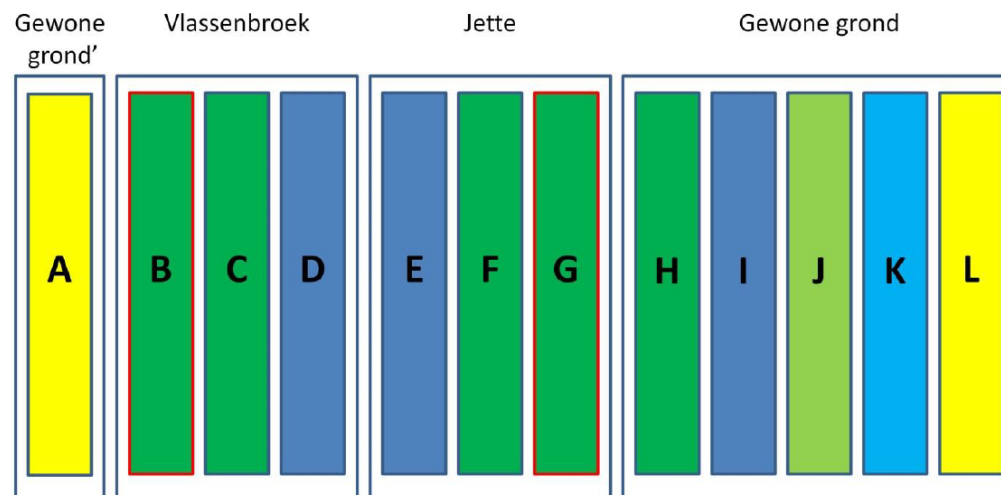
Why

- Qualified clay not always (locally) available
- Strengthening transitions (along roads, around encroachments) on the landward slope
- Levees resistant to (continuous) overflow/(wave) overtopping
 - Increasing acceptable overtopping discharge (reducing requested crest level)
 - Allowing (limited) overflow (extending life time)
 - Increasing protection level of system

Flood Control Area Vlassenbroek



Vlaanderen
is mobiliteit &
openbare werken



Teen



Construction



Section B: local soil treated + cover + 75/25

04/09/2020



15/03/2021



Section C: Local soil treated + 75/25

04/09/2020



15/03/2021



Survey

- Development of the vegetation cover
- Permeability: double ring & lab
- Erosivity: JET
- Resistance to penetration: PANDA
- In situ overflow experiments by 2024...

Overflow experiments by 2024...



Depoldering Hedwige-Prosperpolder



Vlaanderen

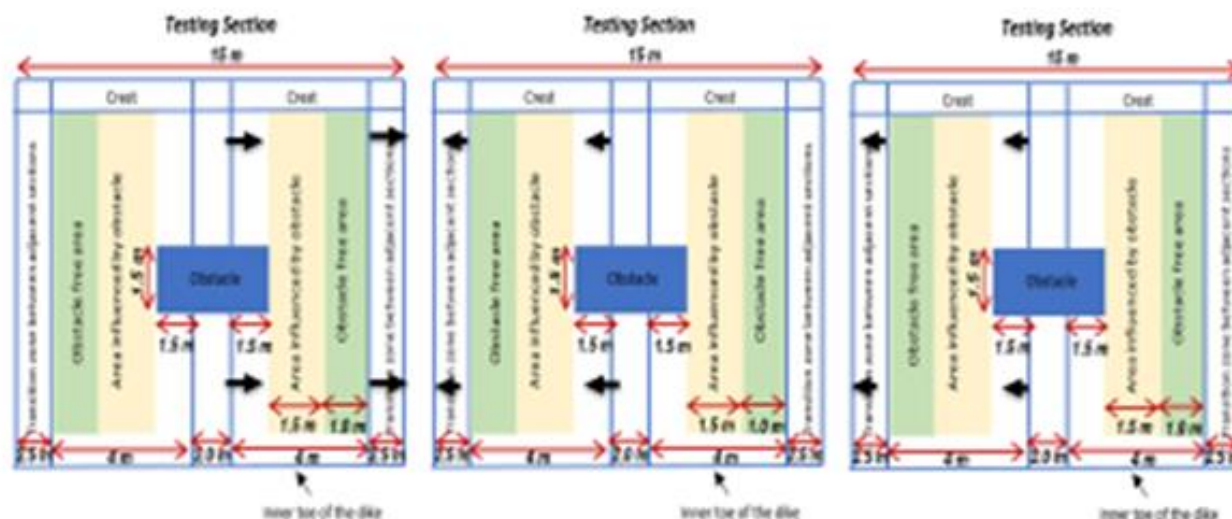
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Living Lab Hedwige-Prosperpolder



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Lesser quality clay EC2
Section 1A and 1B

Lesser quality clay EC2
Sections 2A and 2B

Good quality clay EC1
Sections 3A and 3B

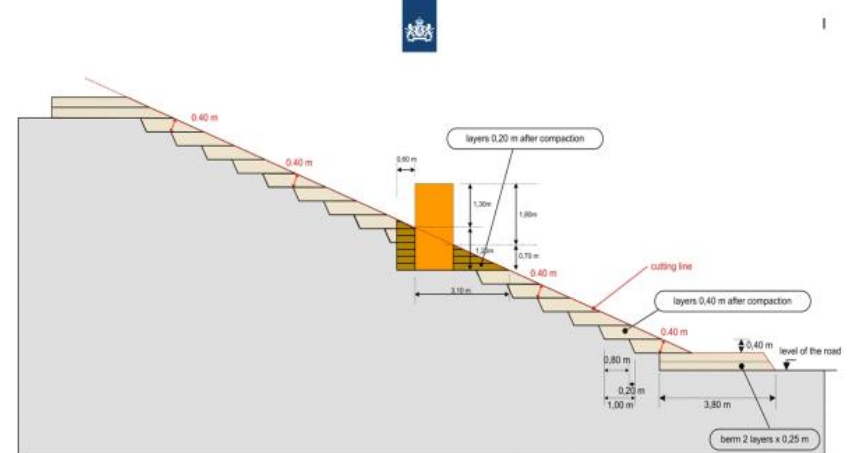
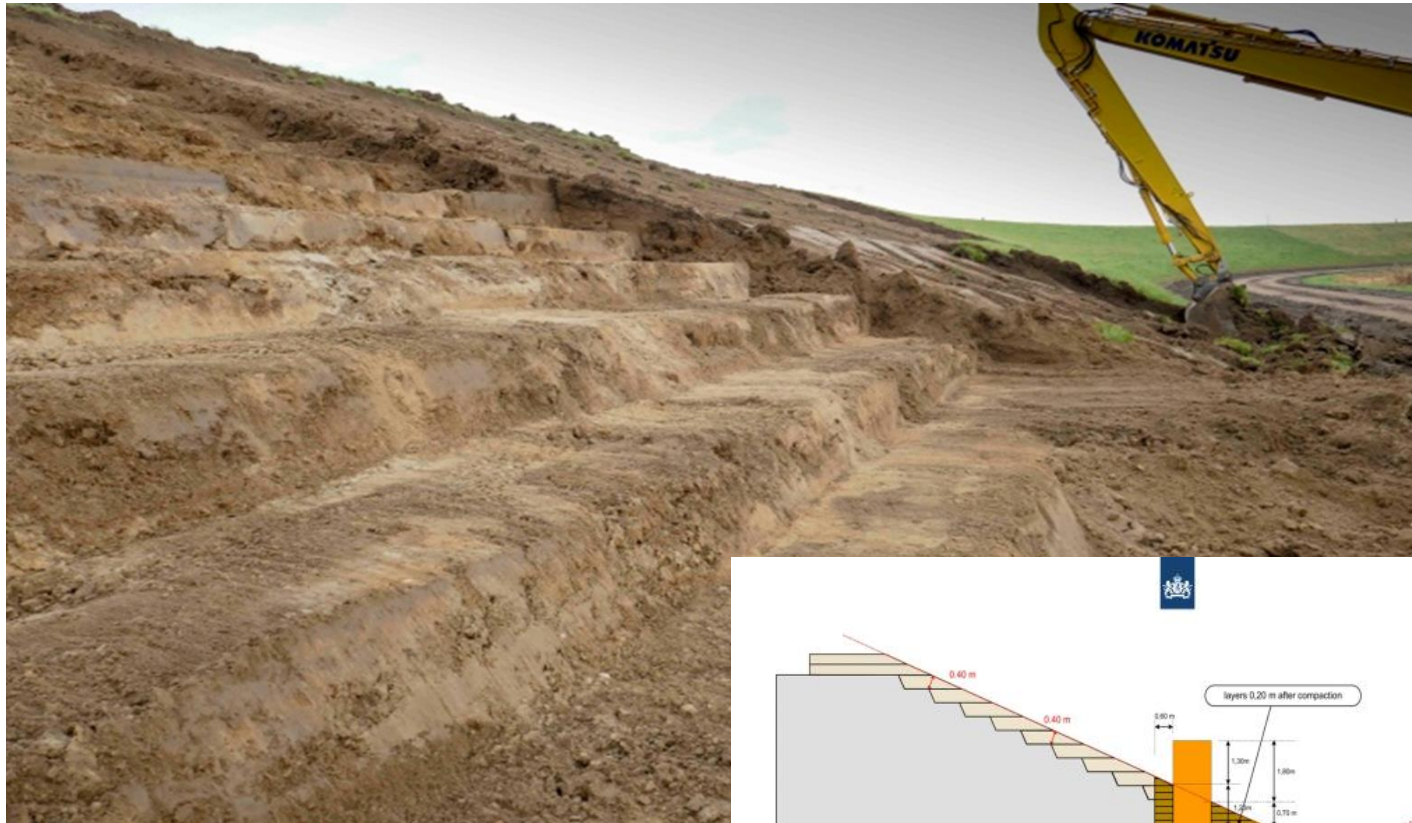
Sections 1B , 2A and 3A to be tested WITHOUT OBJECT (the section of 4m wide to be shifted over 1,5 m towards transition zone, see arrows)

Deltares

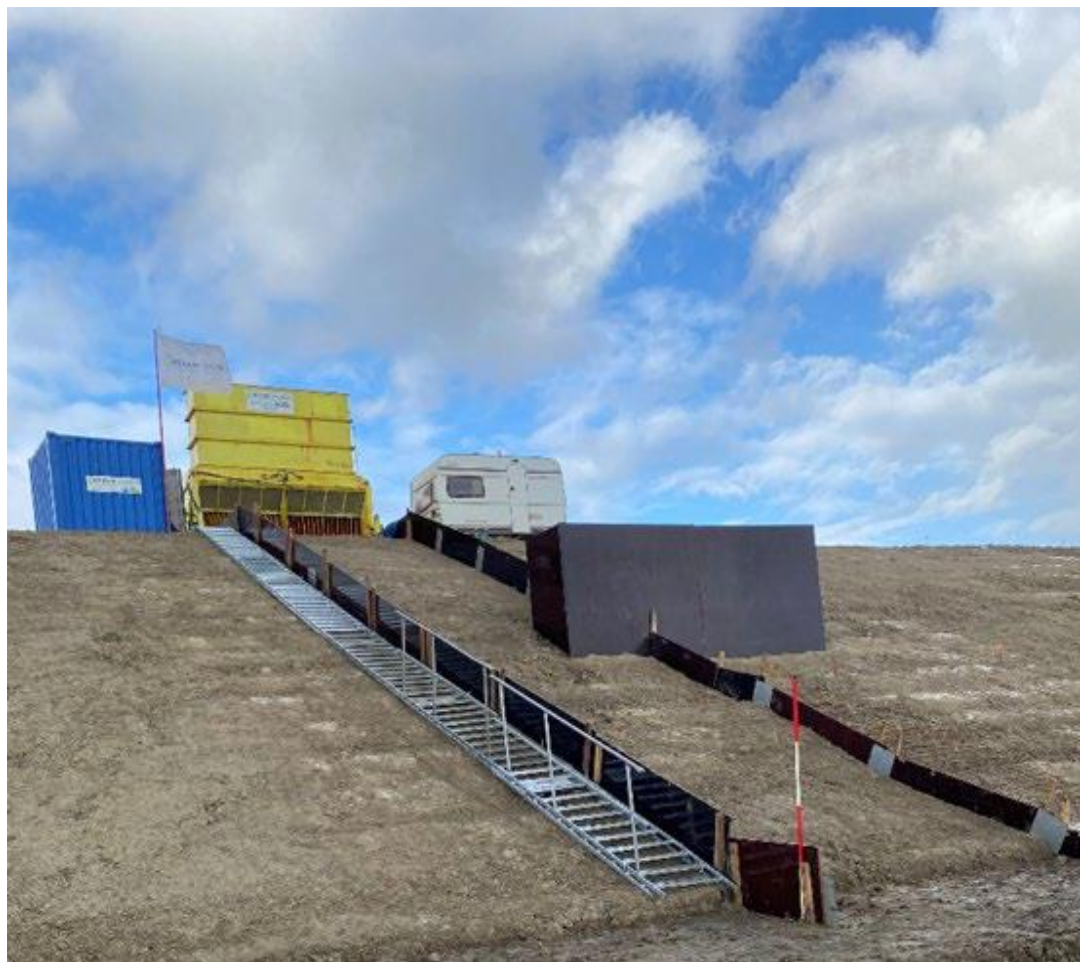
Construction



Construction







Wave overtopping experiments





First results





Thank you

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