

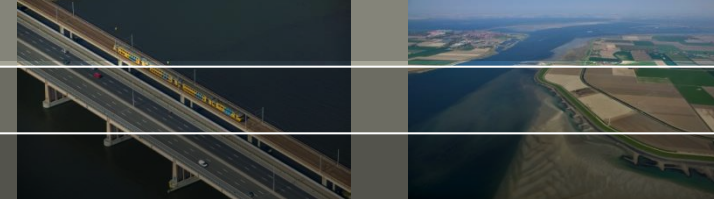


Pull-Over Tests

Overzicht proefprogramma

Arny Lengkeek
Thomas Naves

POT damwandconfiguraties

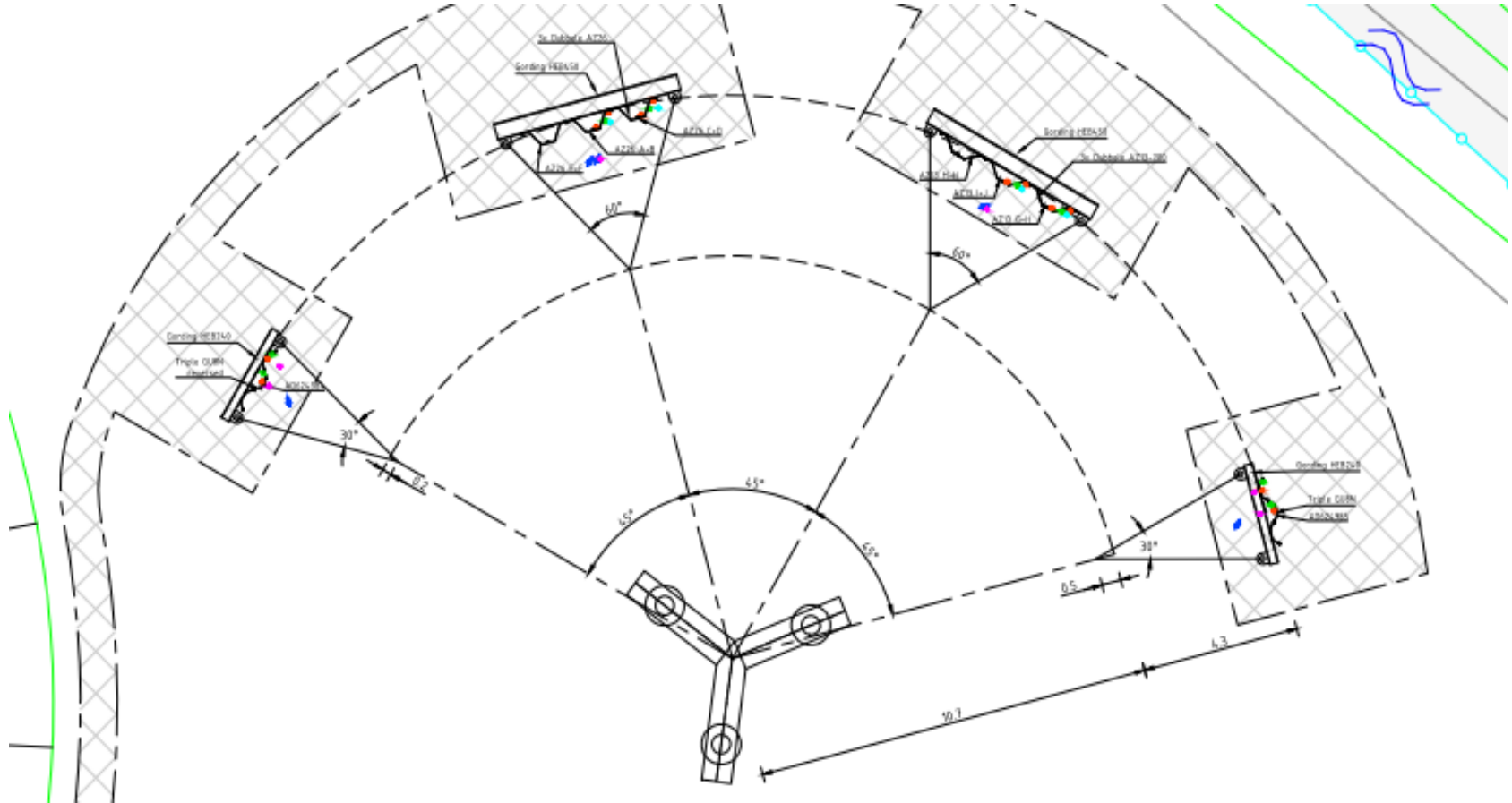
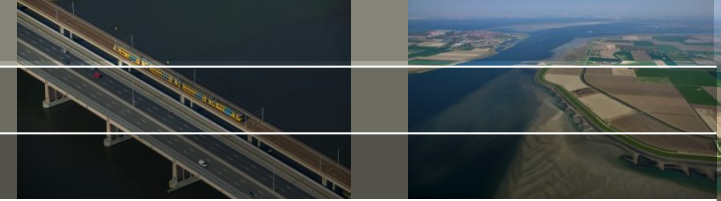


Onderzoeks doelstellingen POT:

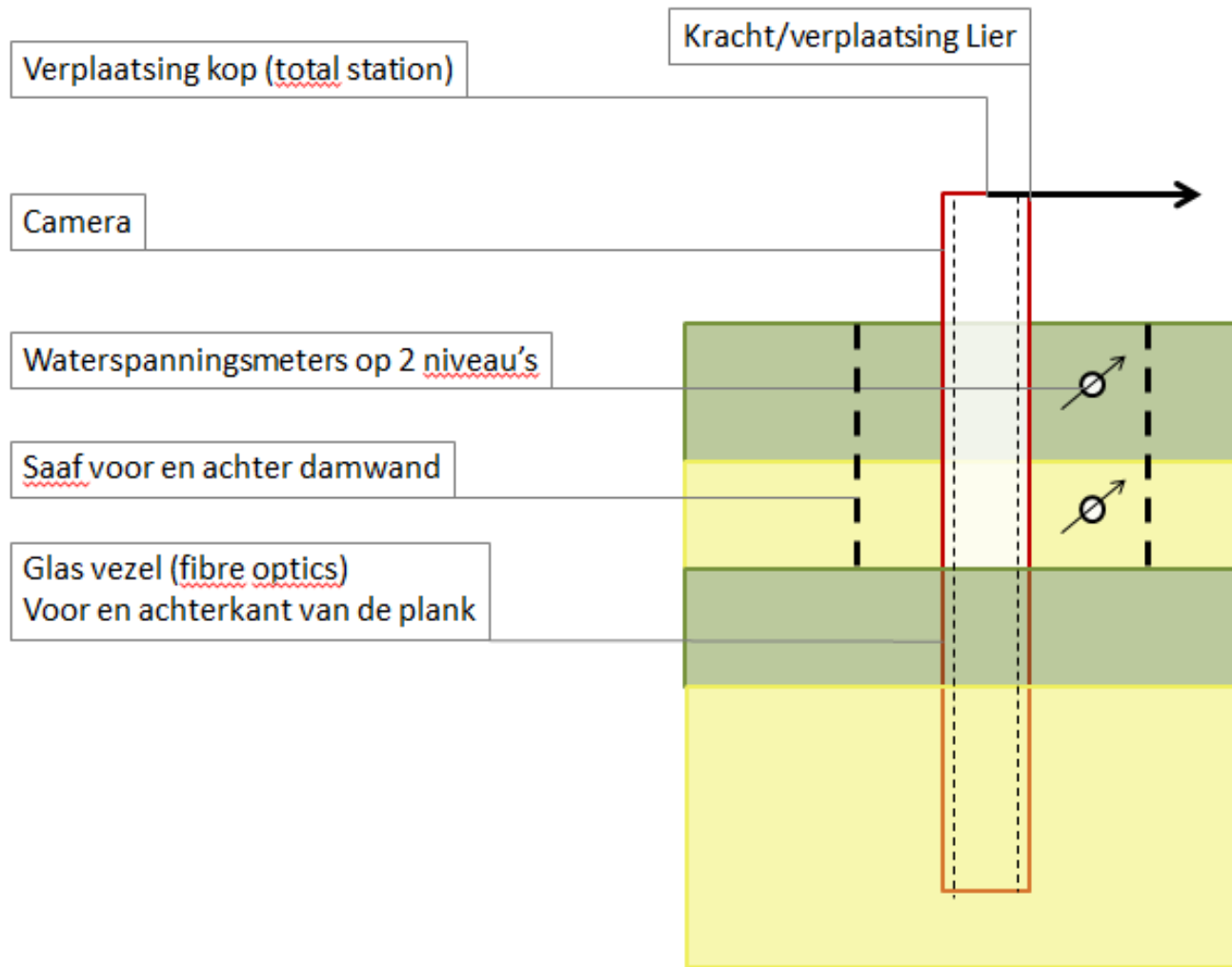
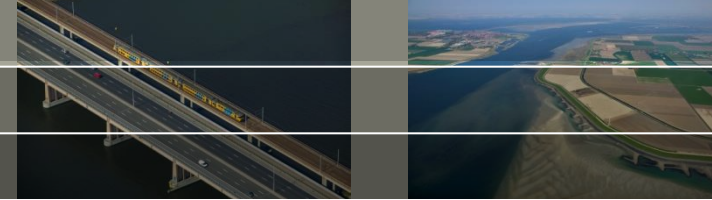
- *Uitgangspunt voor FSP post(pre)dicties;*
- *Discontinue vs continue;*
- *Doorsnede klasse 2 vs 3;*
- *Belastings richting;*
- *Validatie rekenmodellen;*
- *Plastisch vervormingsgedrag.*

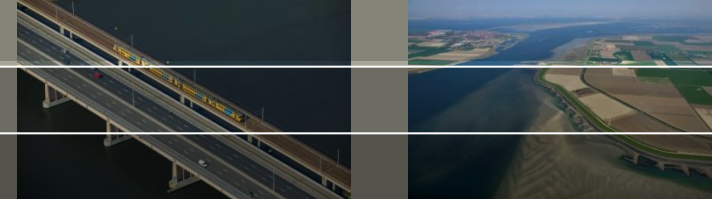


POT proefopzet

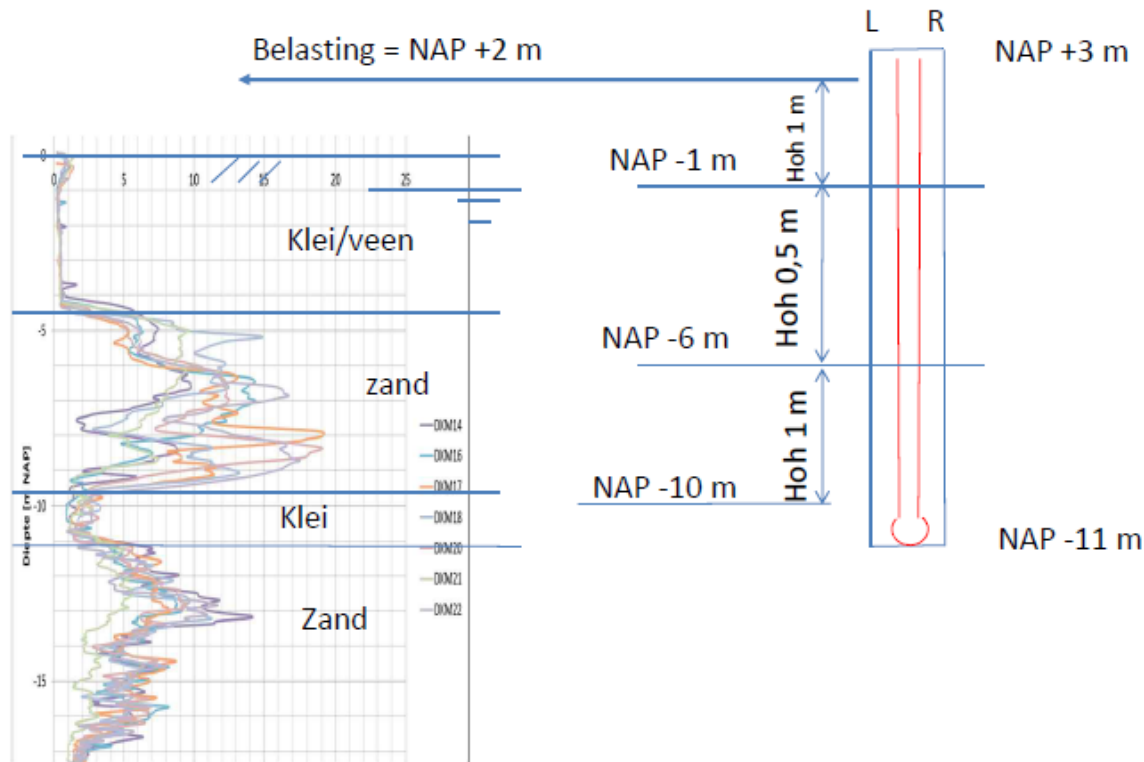


POT monitorin

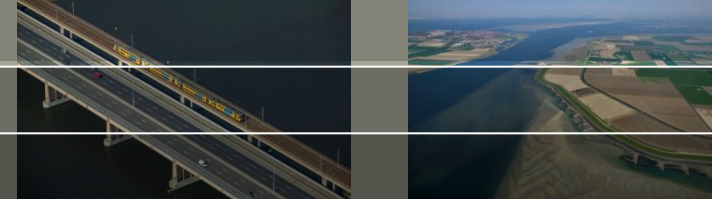




Configuratie POT triple GU8N normal en reversed



POT reactieframe

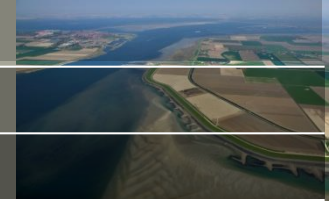


- *3 Buispalen:*
ca. 1m diameter
15m lang
- *Prefab reactieframe*

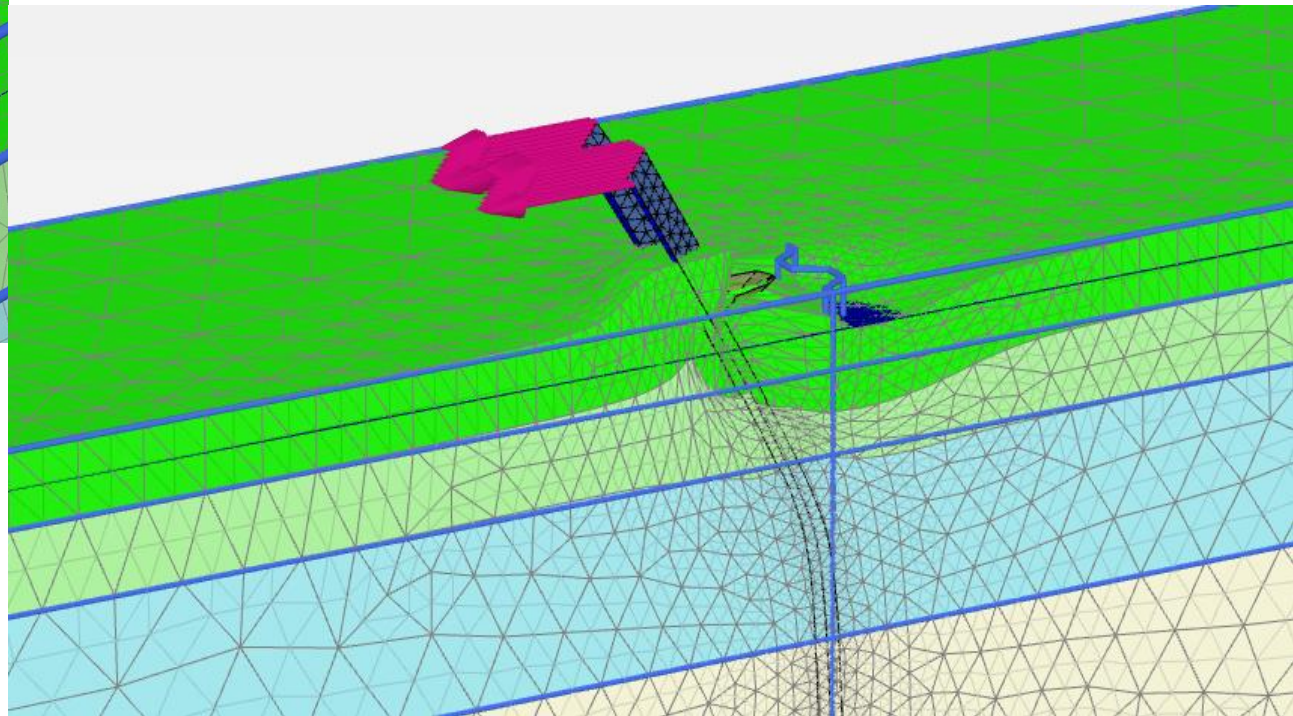
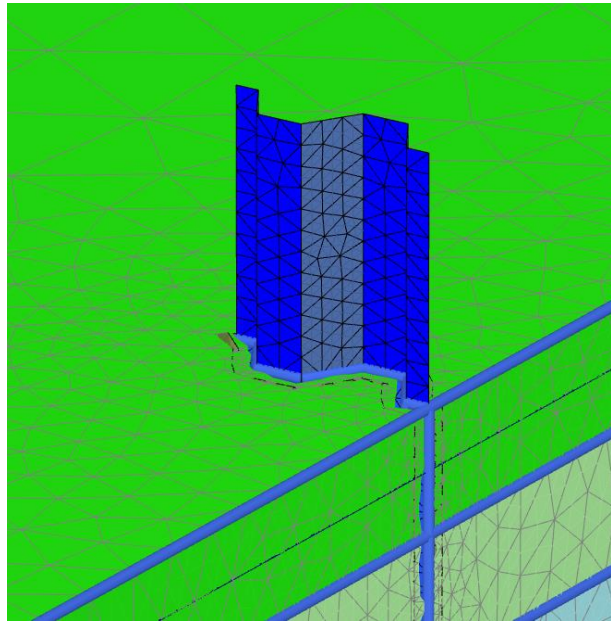
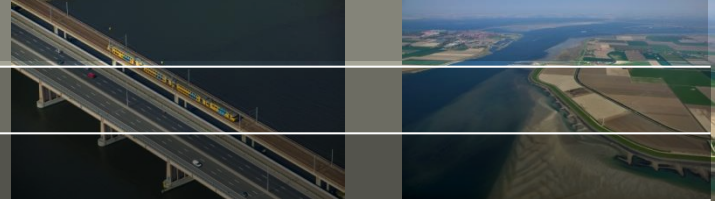


POT Trekinstallatie

- *Op maat gemaakte vijzel*
Slag > 2m
Trekkracht 1200kN, 120ton
Vervormingsgestuurd $\approx 1\text{cm} / \text{min}$

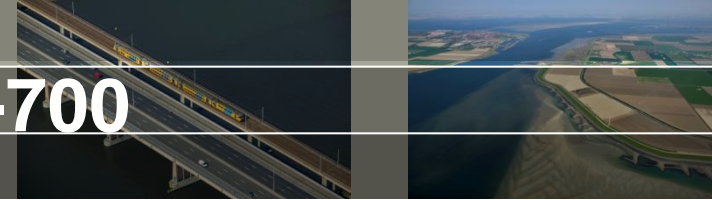


POT predicties: Plaxis 3D

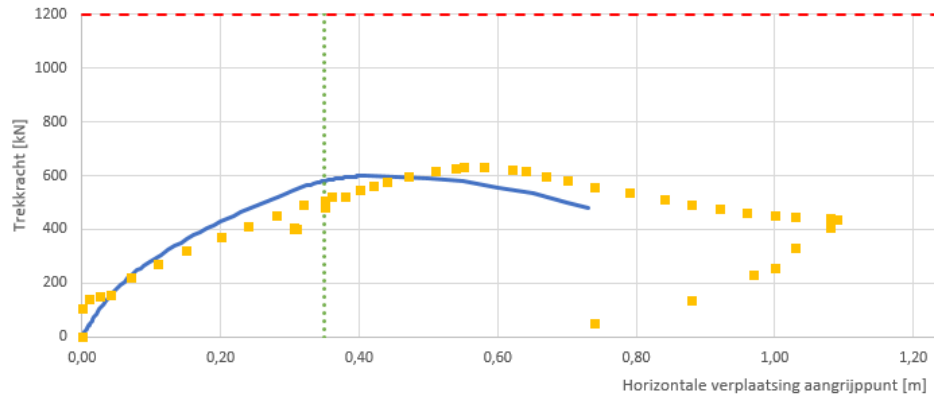


20 april 2018

POT Proefuitvoering 3x AZ13-700

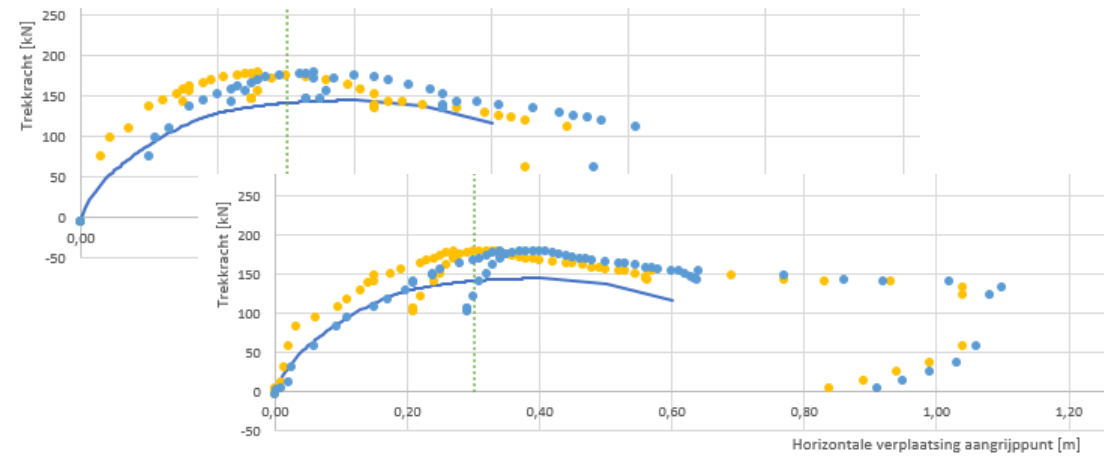


Kracht vs verplaatsing



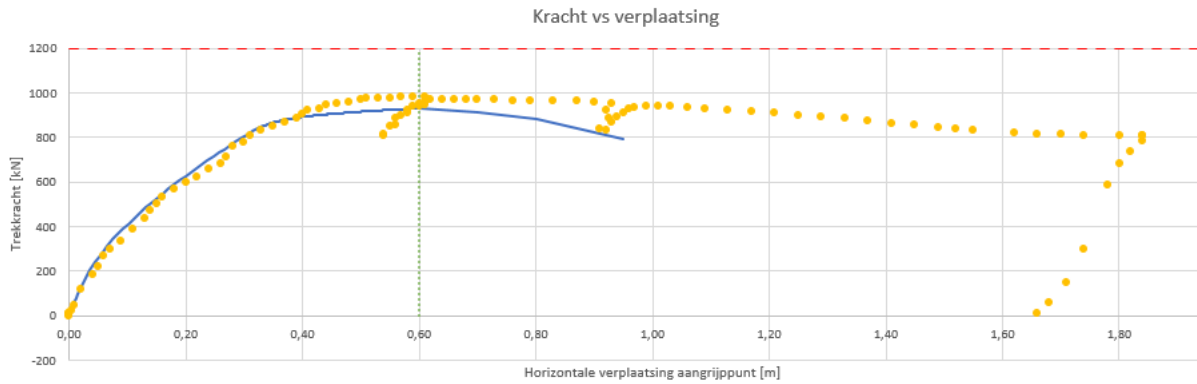
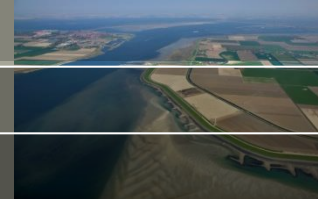
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POT Proefuitvoering GU8N + GU8Nrev

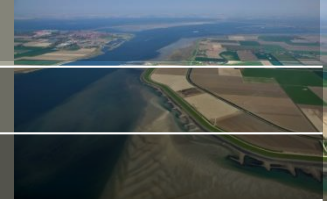


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POT Proefuitvoering 3x AZ26-700



Opgraven damwanden



20 april 2018

Bending moment – prescr. displ. Diagram DIANA

Theoretical values of elastic-plastic bending moments:

$$W_{el,GU8N} = 770 \text{ cm}^3/\text{m}$$

$$W_{pl,GU8N} = 935 \text{ cm}^3/\text{m}$$

Width of sheet pile: 1.8m

$$\rightarrow W_{el,GU8N} = 1.386 \cdot 10^{-3} \text{ m}^3$$

$$\rightarrow W_{pl,GU8N} = 1.683 \cdot 10^{-3} \text{ m}^3$$

$$M_{el} = W_{el} \cdot f_y$$

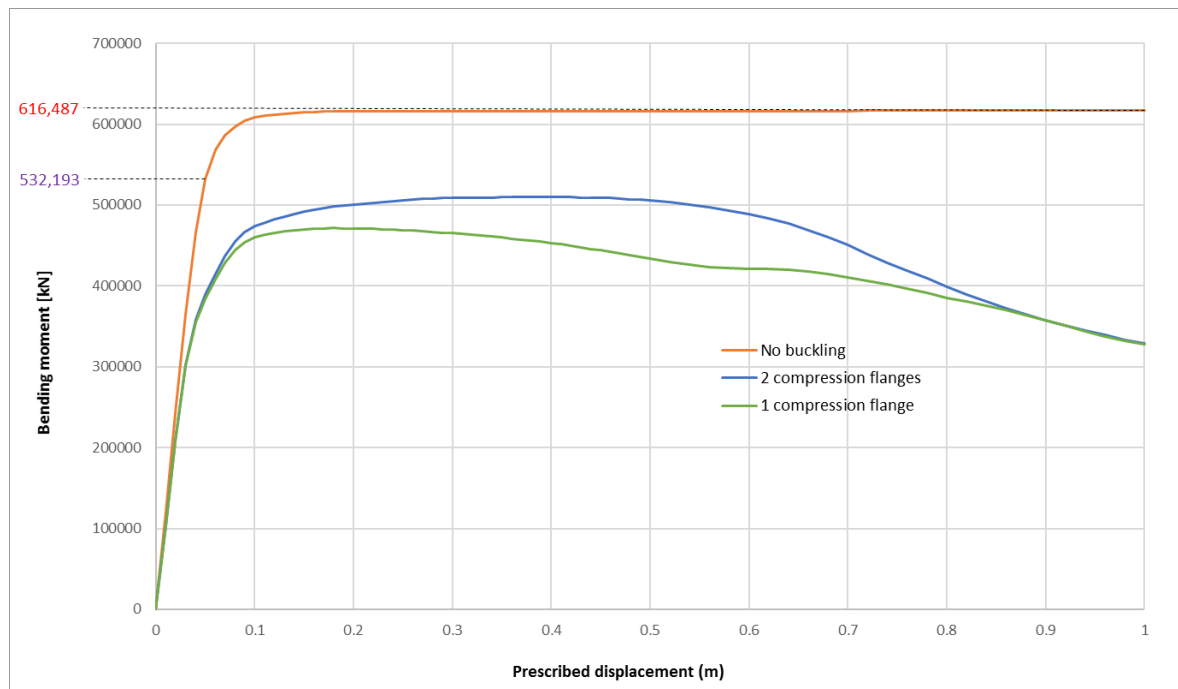
$$= 1.386 \cdot 10^{-3} \cdot 3 \cdot 380,000,000$$

$$= 526,680 \text{ Nm}$$

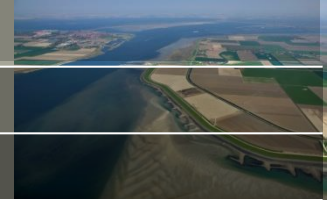
$$M_{pl} = W_{pl} \cdot f_y$$

$$= 1.683 \cdot 10^{-3} \cdot 3 \cdot 380,000,000$$

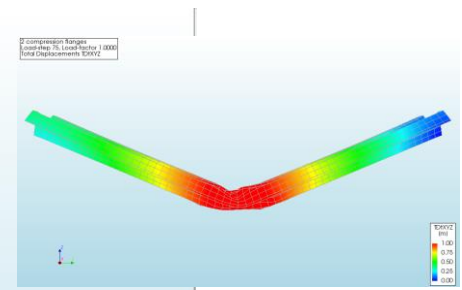
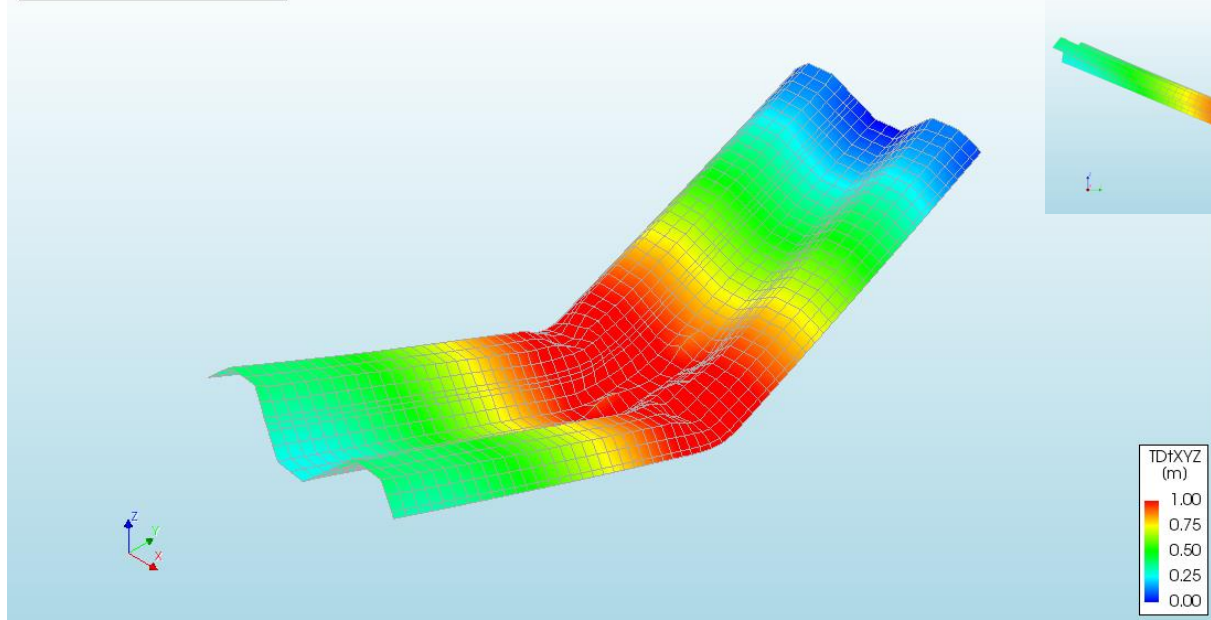
$$= 639,540 \text{ Nm}$$



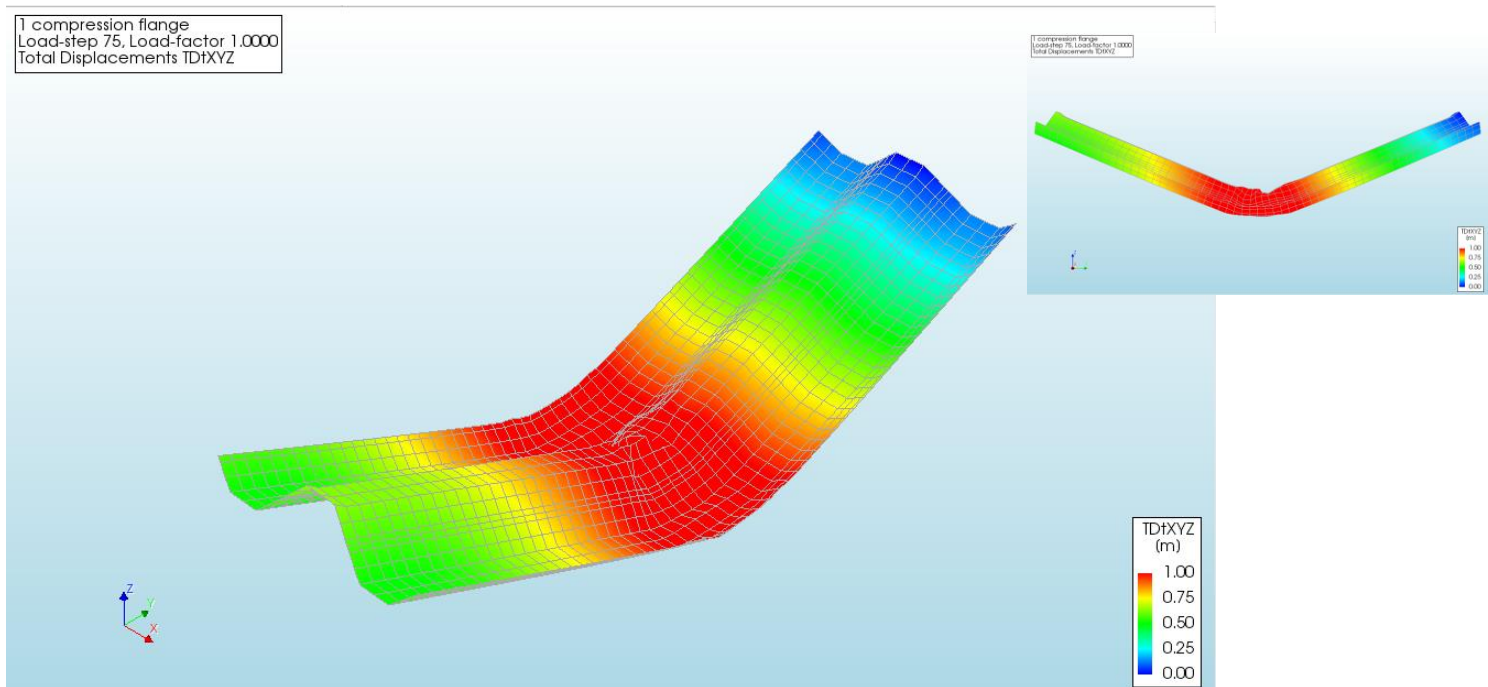
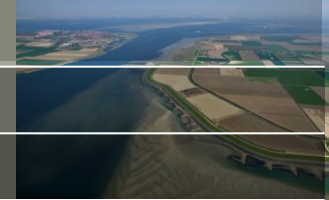
Deflection, under prescr. displ. 1.0m



2 compression flanges
Load-step 75, Load-factor 1.0000
Total Displacements TDtXYZ



Deflection, under prescr. displ. 1.0m reversed



An aerial photograph showing a long, curved dam wall (damwand) in a rural landscape. The dam wall is a raised earthen structure with a green grassy top. To the left of the dam is a wide, shallow river or estuary. To the right is a patchwork of agricultural fields in various shades of green and brown. In the background, a small town or village is visible on the left side, and the horizon shows a clear sky.

Instagram
@eemdijk_damwandproef