



Government of the Netherlands

Site Investigations HKN

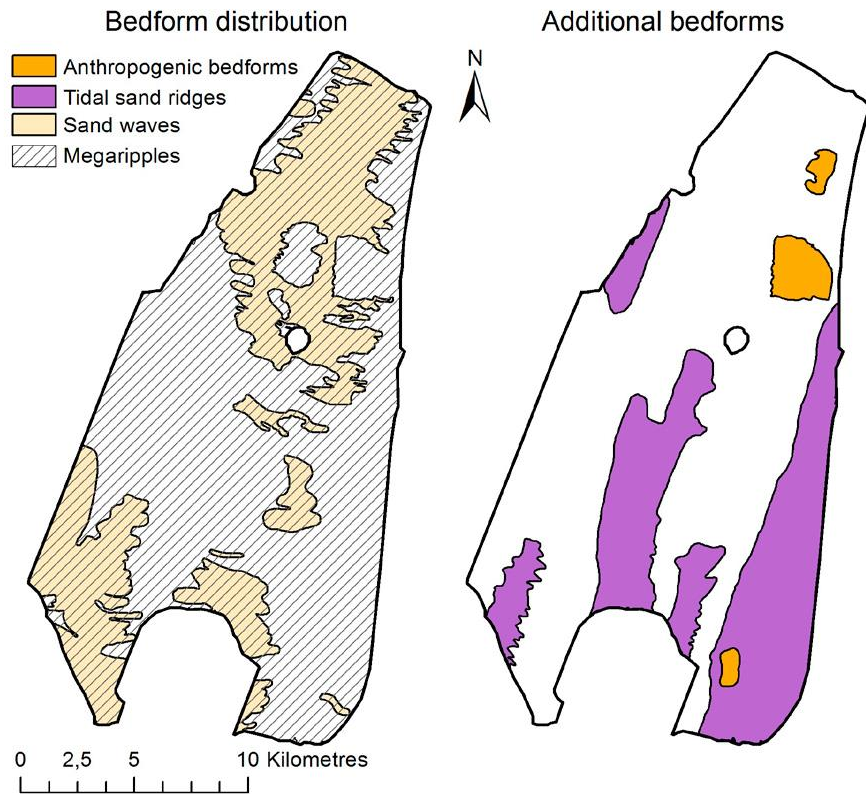
Matté Brijder - RVO.nl

wind &
water
works®

Workshop – 18 April 2019 Zandvoort



Geophysical survey (disclosed September 2018)



- > Water depth: 15 – 28 m LAT
- > Sand waves are present, superposed by megaripples
- > Nine cables and four pipelines detected
- > Six wrecks identified
- > Three dredged zones

Bedform distribution overview and additional bedforms.



Geotechnical survey (to be disclosed April 2019)

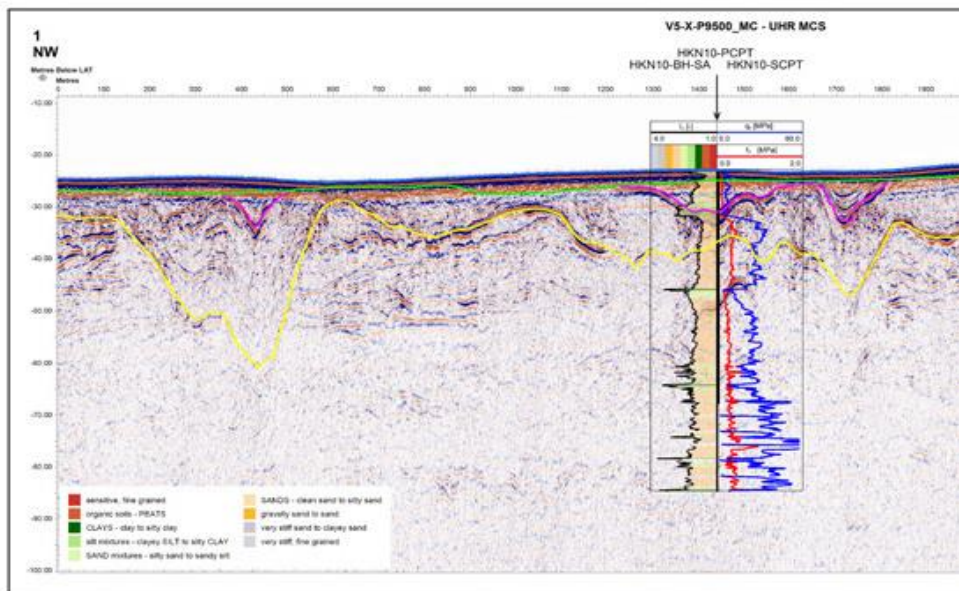


Assembly of the Coiled Rod System on board of the Despina

- > The SEACALF® Constant Drive System: safe test unit for high quality data acquisition.
- > Seismic testing from seafloor for a higher quality seismic data set.
- > Extensive in situ and laboratory test programmes for thermal conductivity and heat capacity
- > Recommendations for corrosion rates and seismicity assessment



Geotechnical survey



Seismic UHR MCS cross section with CPT data projected

- Soil conditions: predominantly sand deposits, with minor clays and intermediate soils
- Four main soil units
- Two main palaeochannel systems/levels, related to meltwater channels
- Report containing results of a characteristic values study will be provided in Q2/2019



Wind Resource Assessment (disclosed April 2019)

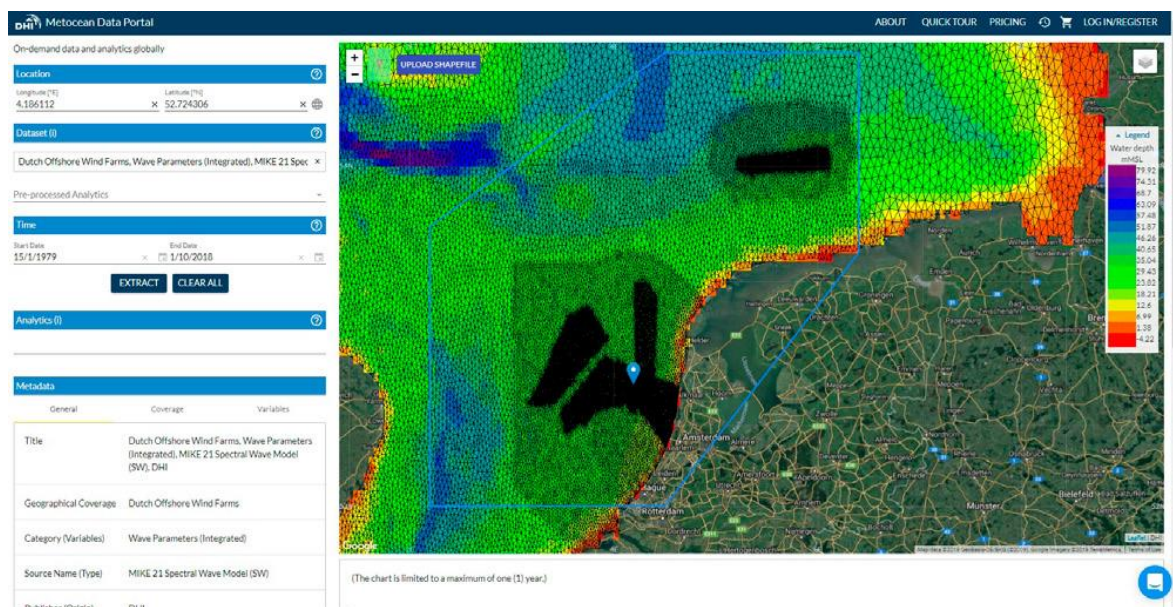


- › Mean wind speed at 100 m at centre: 9.56 m/s
- › Spatial variation: ± 0.1 m/s
- › Innovative LES-model for calculation of wake effects
- › Joint assessment (with metocean desk study) mean wind conditions, building confidence in results achieved.





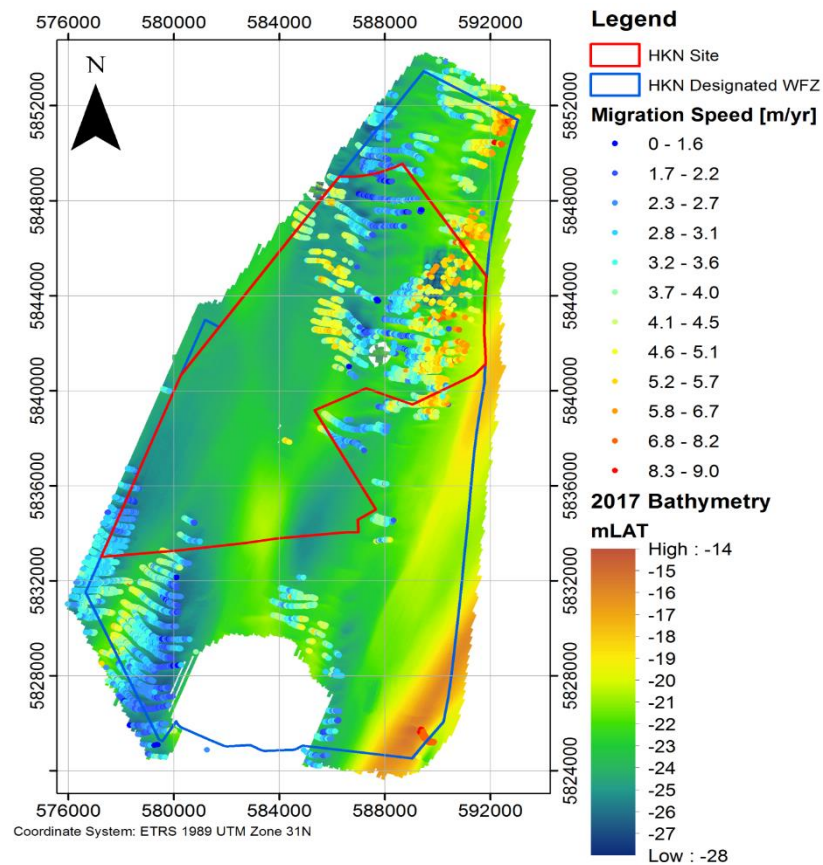
Metocean desk study (disclosed April 2019)



- › HKN design level report
- › Roadmap 2030 feasibility level report
- › World's first certified public metocean database (web application)
- › Extreme conditions defined with less conservatism, with potential to decrease LCOE.
- › 50-year return period significant wave height of 7.3 m



Morphodynamics and Scour Mitigation (disclosed April 2019)



Differences with HKZ:

- > Combined study of Morphodynamics and Scour
- > Morphology within dredged areas investigated in detail
- > Most probable depths UXOs computed



Planning and intended tender scheme offshore wind energy

GW	WFS	Tender	Site studies
0,7	HKN V	Q4 2019	<ul style="list-style-type: none">• Geotech will be published end of April 2019• All other site studies published at offshorewind.rvo.nl
0,7	HKW VI	Q2 2021	Q3 2020
0,7	HKW VII		
0,7	TNW	Q4 2022	Q4 2021



- > Archaeological assessment 9th May
- > UXO risk assessment 9th May
- > Wind Resource assessment 16th May
- > Metocean desk study & database 16th May
- > Morphodynamics and Scour 23rd May
- > Metocean campaign 23rd May
- > Geophysical survey & Geotechnical investigations TBC

Register for HKN webinars:
e-mail WOZ@RVO.NL

