Rijksdienst voor Ondernemend Nederland



# De Noordzee in beeld

Peter-Paul Lebbink
Michel Vrolijk

# Quote;

„Windmolens op land worden vaak gezien als overlast.

Op zee is dat veel minder het geval en vandaar dat we ons nu vooral concentreren op de Noordzee, waar we zoveel mogelijk windmolens willen neerzetten.”

(Uitspraak gedaan in 2017, Henk Kamp)

Bron: NOS

# Inhoudsopgave

1) Waarom doet RVO bodem onderzoek op zee?

2) Welke onderzoeken doet RVO

3) Geotechnisch werk op zee

4) Offshore data in de BRO

# Waarom doet RVO bodem onderzoek op zee?



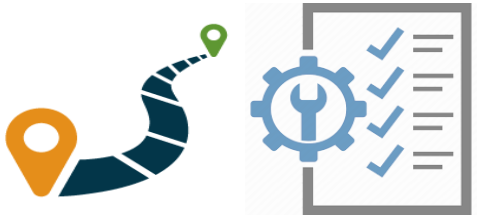
# Nederlands Offshore Windenergie Programma

## Ministeries (A-C)

A. Aanwijzen Wind energie gebied (I&W)



B. Routekaart (EZK)



C. Aanlanding onderzoek (EZK)



## Uitvoerende organisaties (1-5)

1. Kavelbesluit (RWS & EZK)



2. Lokatie Studies (RVO)



3. Ontwikkeling Net op Zee (TenneT, EZK & RWS)



4. Organiseren tender (EZK & RVO)



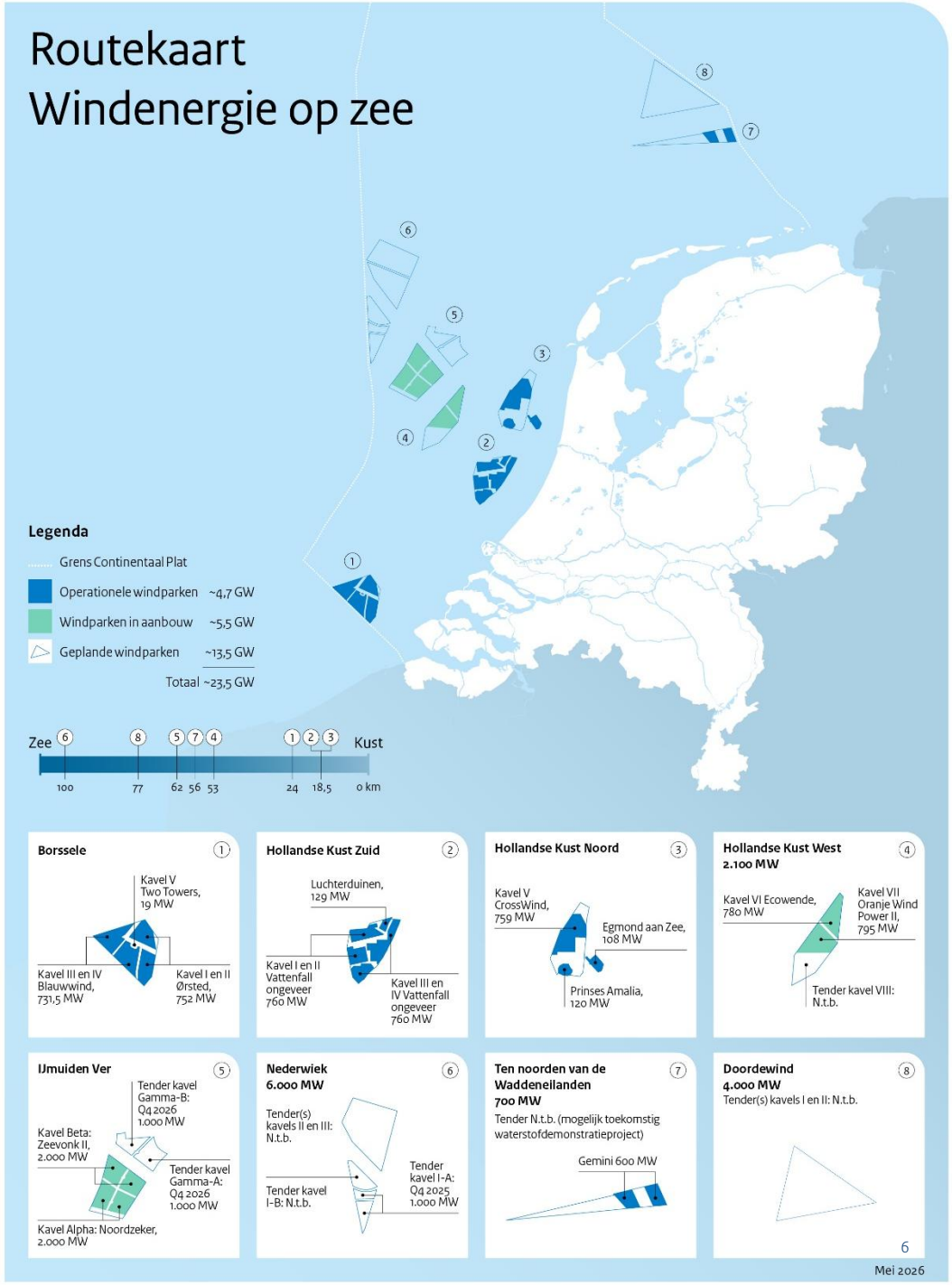

## Bouwfase

5. Inspectie en Handhaving (RWS & SodM)

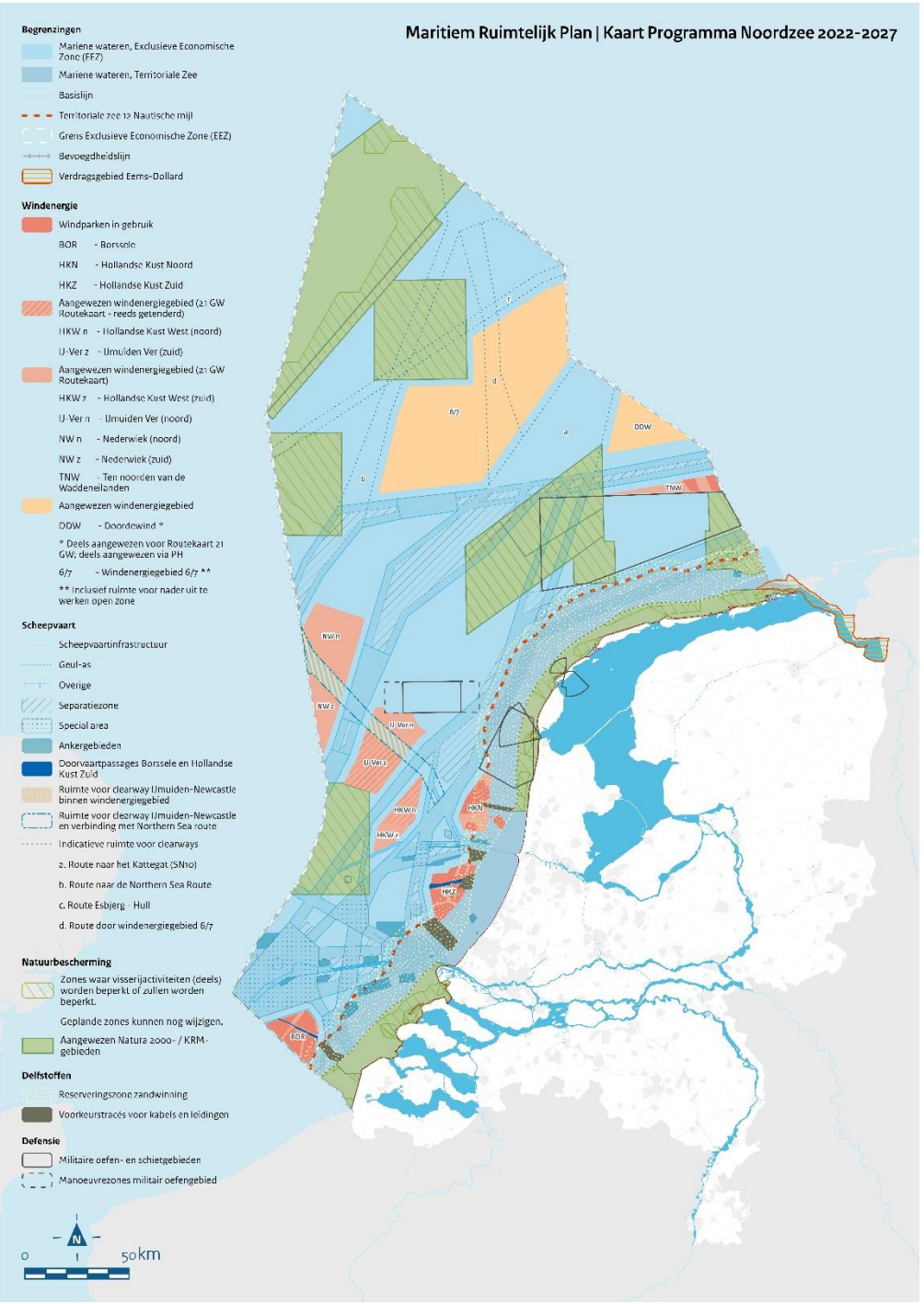


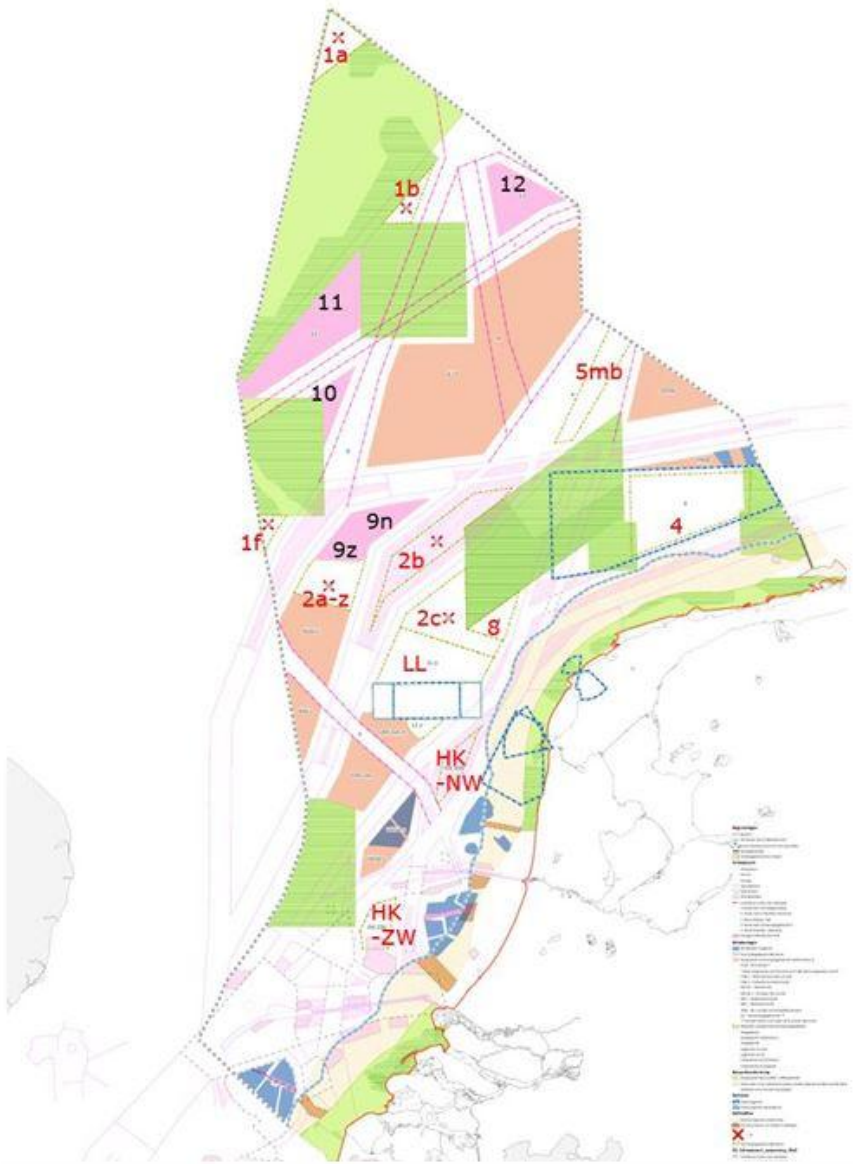
# Routekaart Wind op Zee

- Bestaande windparken
  - 4,7 GW
- Windparken in aanbouw
  - Hollandse Kust VI ± 750 MW → 2026
  - Hollandse Kust VII ± 750 MW → 2027
- Vergund
  - IJmuiden ver Alpha en Beta 2x ± 2 GW
- Tender Windparken gepland
  - 2 x ± 1 GW → Sluiting 10 december 2026
  - Overig ruimte voor ± 11,5 GW



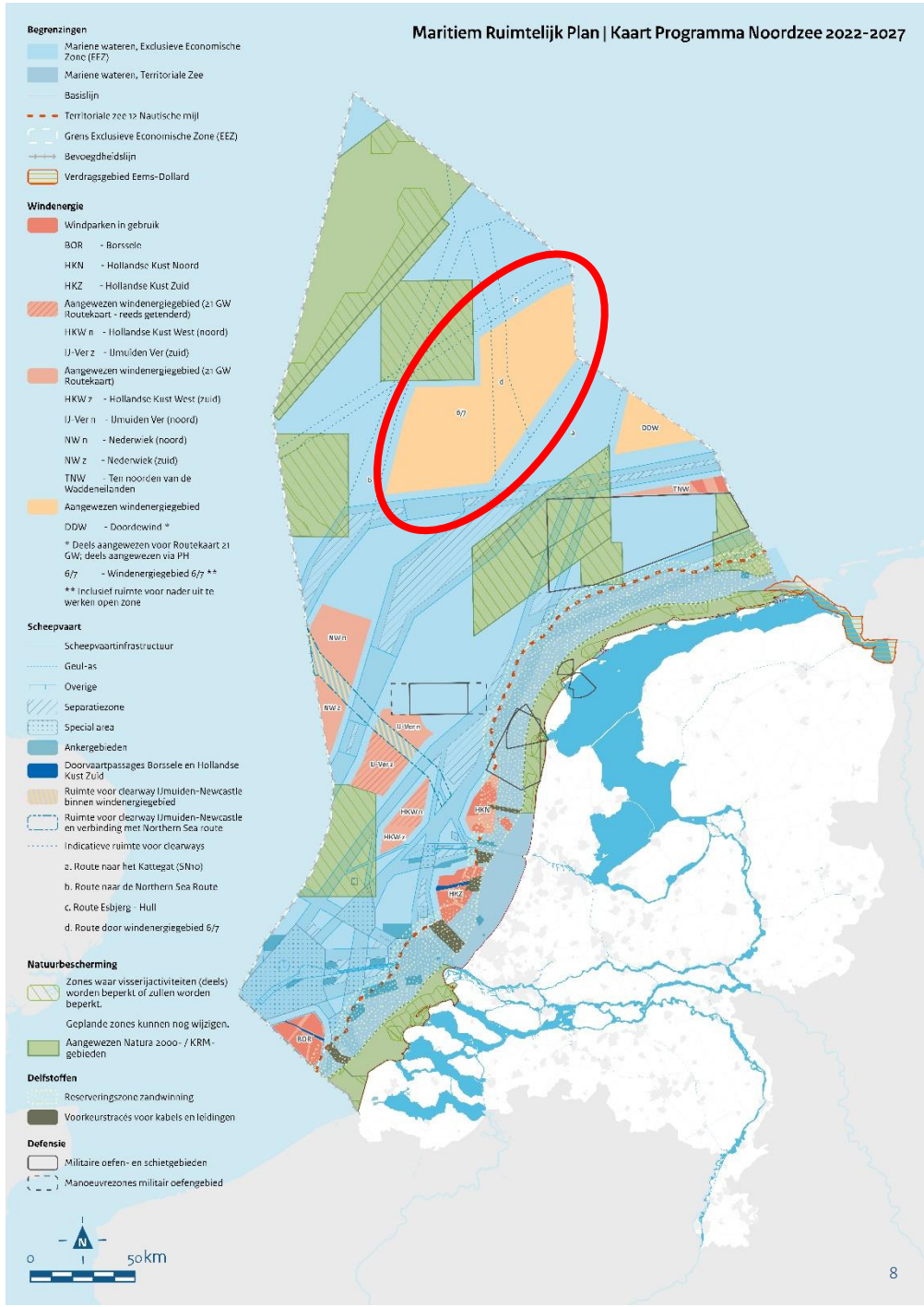
# Ontwikkeling routekaart



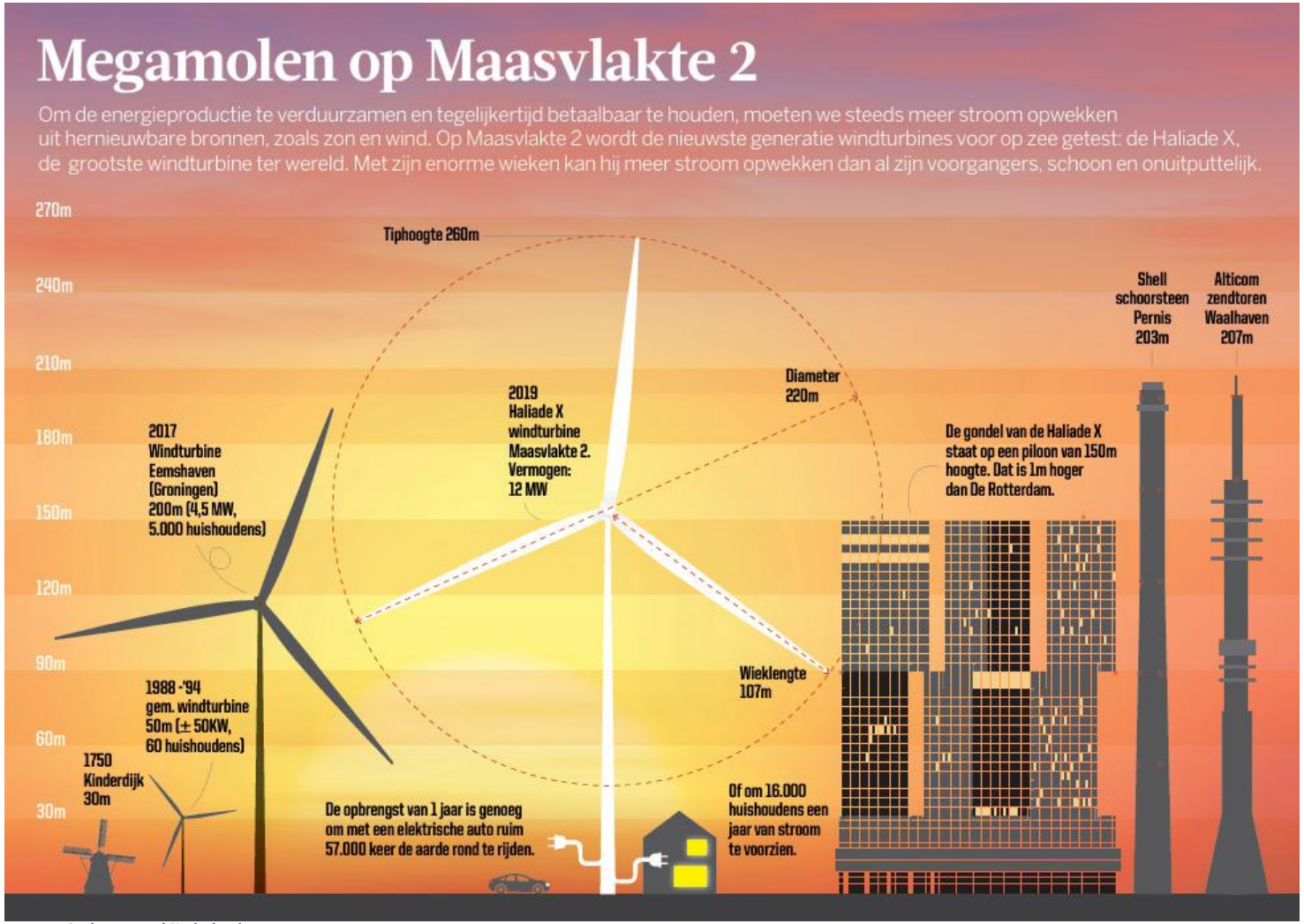




A31
N31
A7
N359
A32
A6
N307
N305
N702
A28
A2
A1
A27
A30
N11
A12
A10
A9
A200



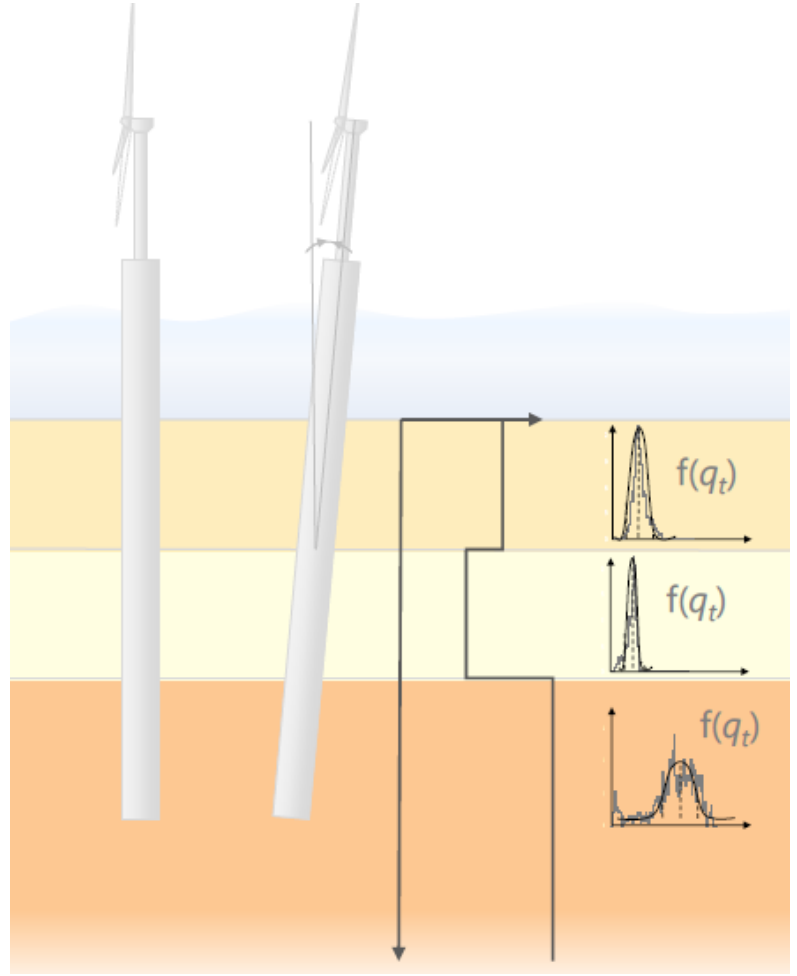

Maritiem Ruimtelijk Plan | Kaart Programma Noordzee 2022-2027
Begrenzingen
Mariene wateren, Exclusieve Economische Zone (EEZ)
Mariene wateren, Territoriale Zee
Basislijn
Territoriale zee 12 Nautische mijl
Grens Exclusieve Economische Zone (EEZ)
Bevoegdheidslijn
Verdragsgebied Eems-Dollard
Windenergie
Windparken in gebruik
BOR - Borssele
HKN - Hollandse Kust Noord
HKZ - Hollandse Kust Zuid
Aangewezen windenergiegebied (21 GW Routekaart - reeds getenderd)
HKW n - Hollandse Kust West (noord)
IJ-Ver z - IJmuiden Ver (zuid)
Aangewezen windenergiegebied (21 GW Routekaart)
HKW z - Hollandse Kust West (zuid)
IJ-Ver n - IJmuiden Ver (noord)
NW n - Nederwiek (noord)
NW z - Nederwiek (zuid)
TNW - Ten noorden van de Waddeneilanden
Aangewezen windenergiegebied
DDW - Doordewind *
* Deels aangewezen voor Routekaart 21 GW; deels aangewezen via PH
6/7 - Windenergiegebied 6/7 **
** Inclusief ruimte voor nader uit te werken open zone
Scheepvaart
Scheepvaartinfrastructuur
Geul-as
Overige
Separatiezone
Special area
Ankergebieden
Doorvaartpassages Borssele en Hollandse Kust Zuid
Ruimte voor clearway IJmuiden-Newcastle binnen windenergiegebied
Ruimte voor clearway IJmuiden-Newcastle en verbinding met Northern Sea route
Indicatieve ruimte voor clearways
a. Route naar het Kattegat (SNto)
b. Route naar de Northern Sea Route
c. Route Esbjerg - Hull
d. Route door windenergiegebied 6/7
Natuurbescherming
Zones waar visserijactiviteiten (deels) worden beperkt of zullen worden beperkt.
Geplande zones kunnen nog wijzigen.
Aangewezen Natura 2000- / KRM-gebieden
Delfstoffen
Reserveringszone zandwinning
Voorkeurstracés voor kabels en leidingen
Defensie
Militaire oefen- en schietgebieden
Manoeuvrezones militair oefengebied
6/7
DDW
TNW
NW n
NW z
IJ-Ver n
IJ-Ver z
HKW n
HKW z
HKN
HKZ
BOR
N
0
50 km

# Wind op land vs Wind op Zee




IJmuiden Ver Gamma

- Max hoogte 304,8 m
- Diameter = 279,8 m
- **Minimaal** vermogen 15 MW



# Werk op zee!



Grondonderzoek in het weidse veld.

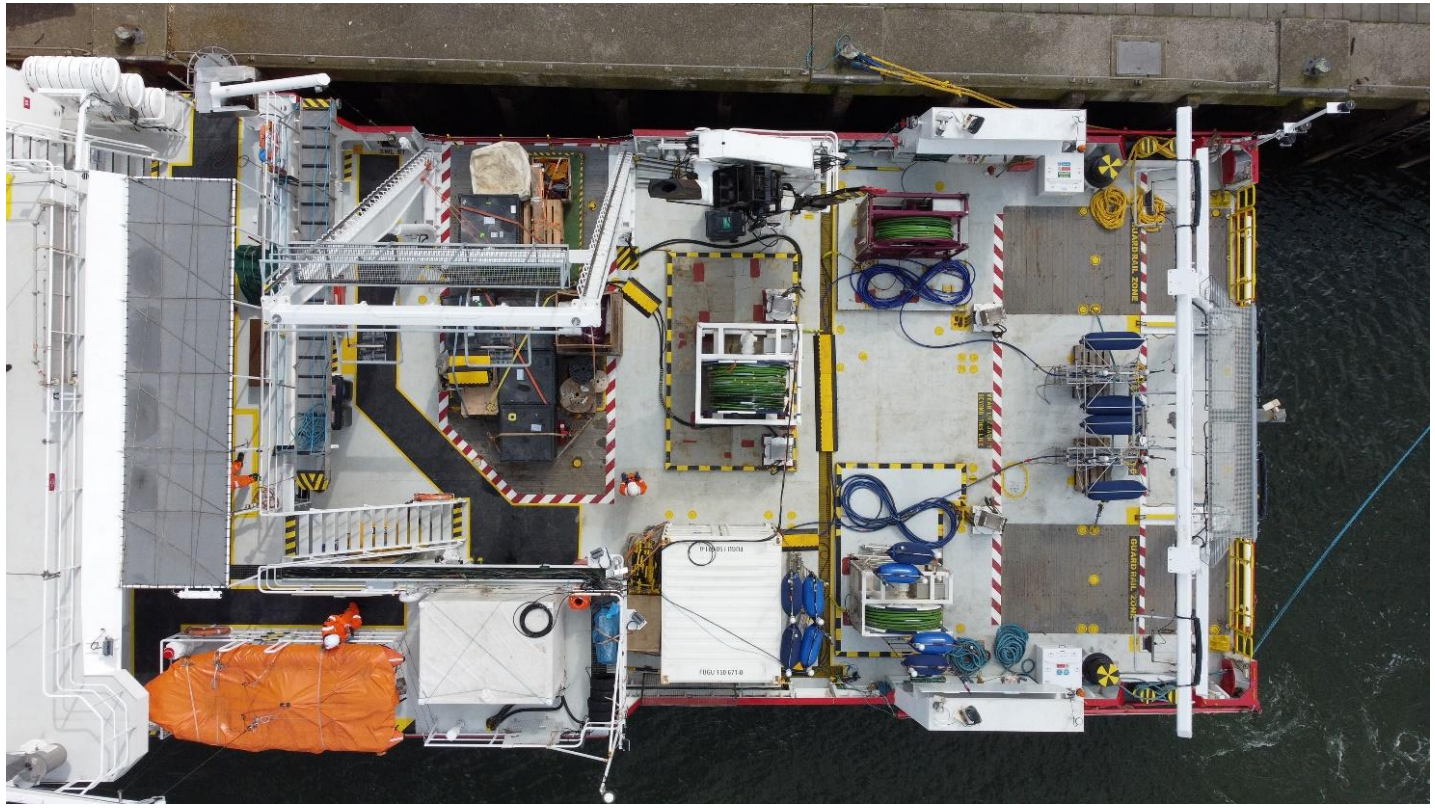
Beter lekker op land ☺





# Werk op zee

- Veiligheid
- Logistiek
- Weer
- Kosten

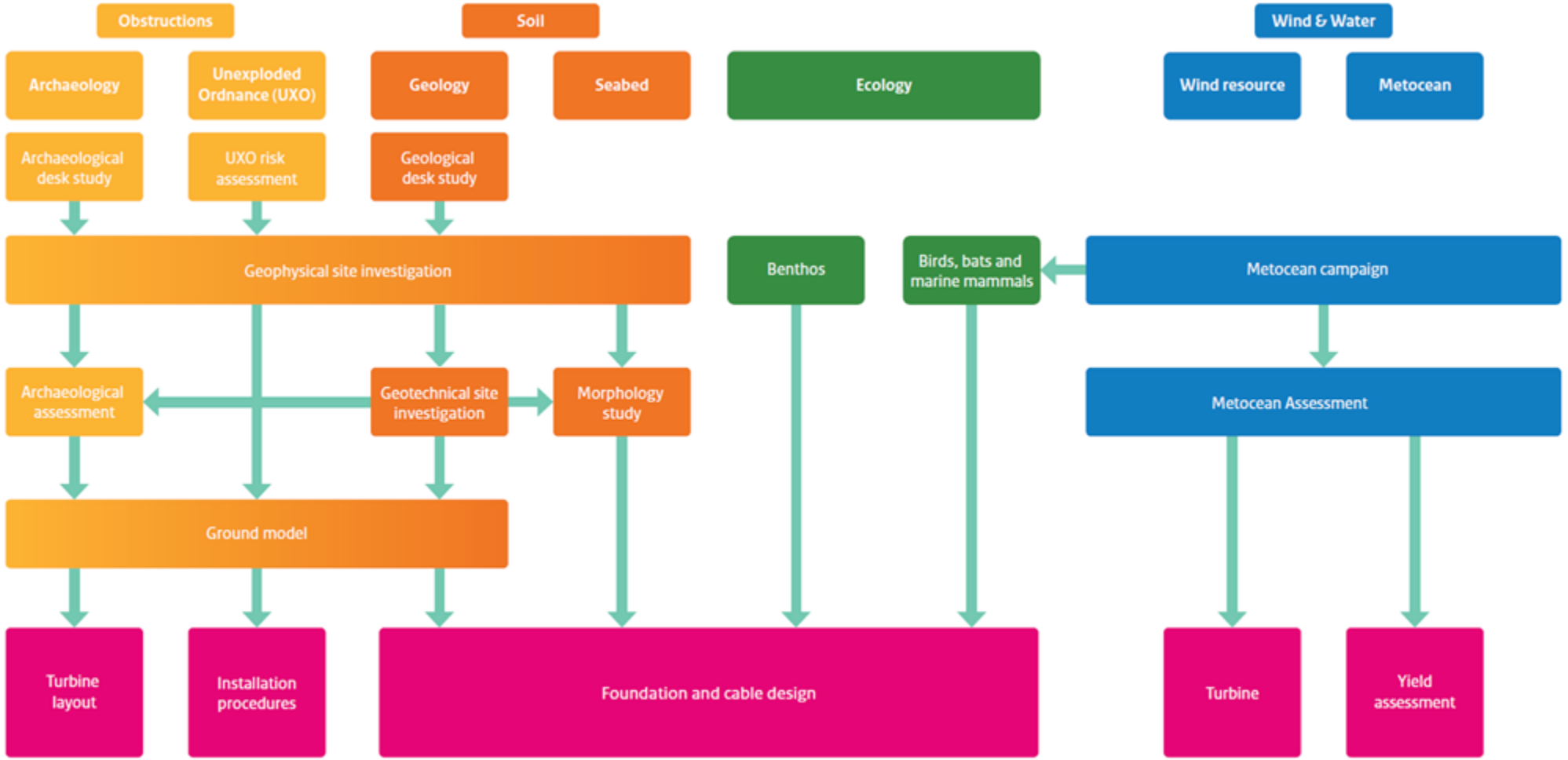




# Welke onderzoeken doet RVO

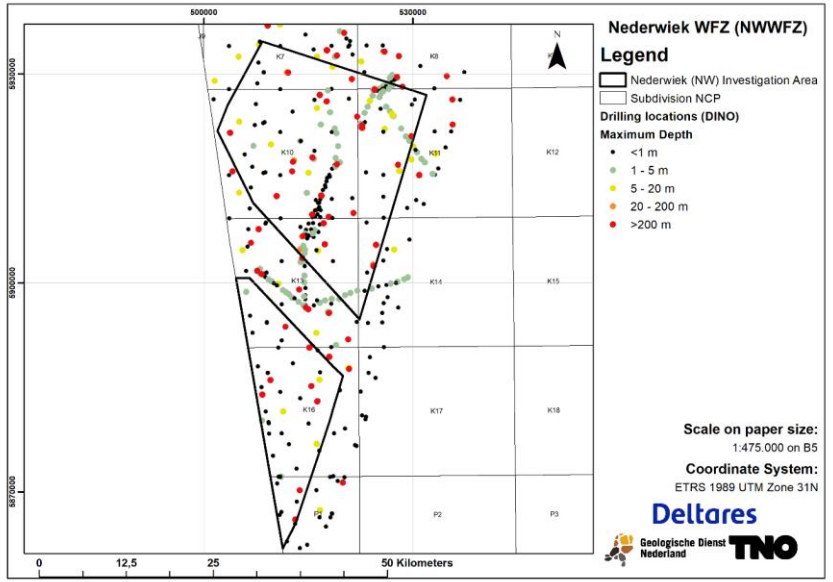


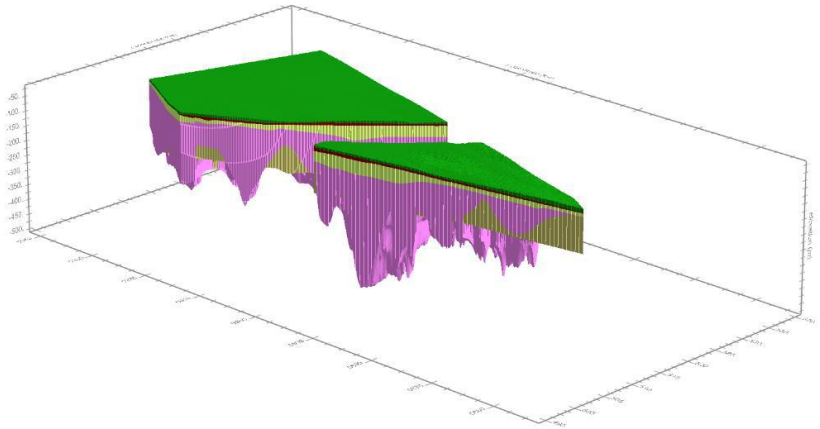
# RVO Site Characterisation Package

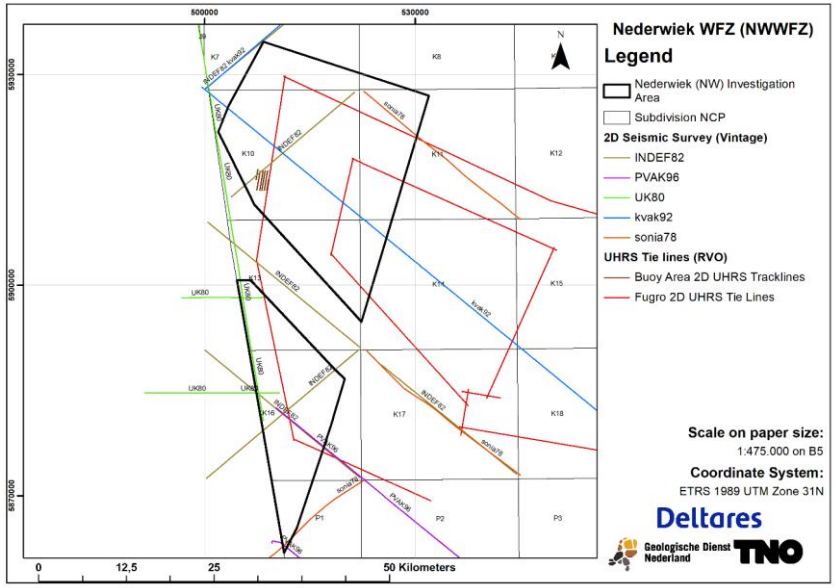


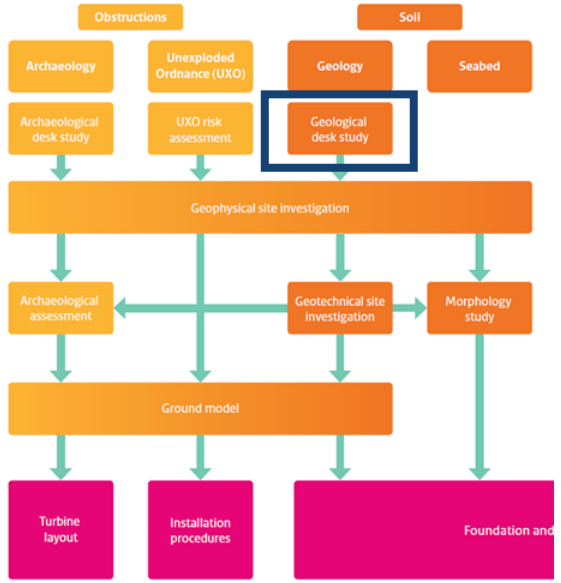
# Bureaustudie

- Wat is er al bekend van het gebied
- Wat kunnen we verwachten

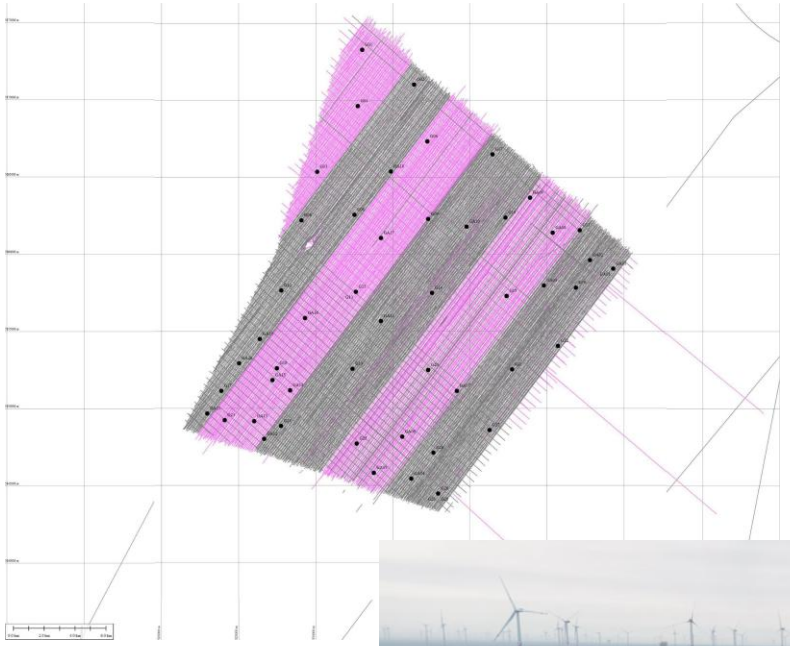




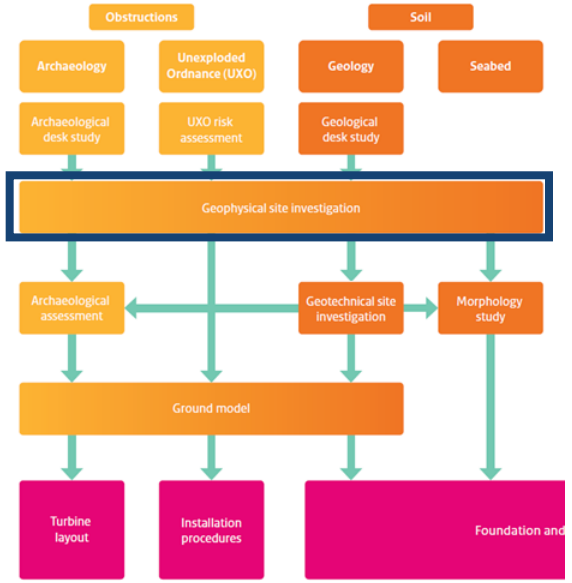



# Geofysische Survey

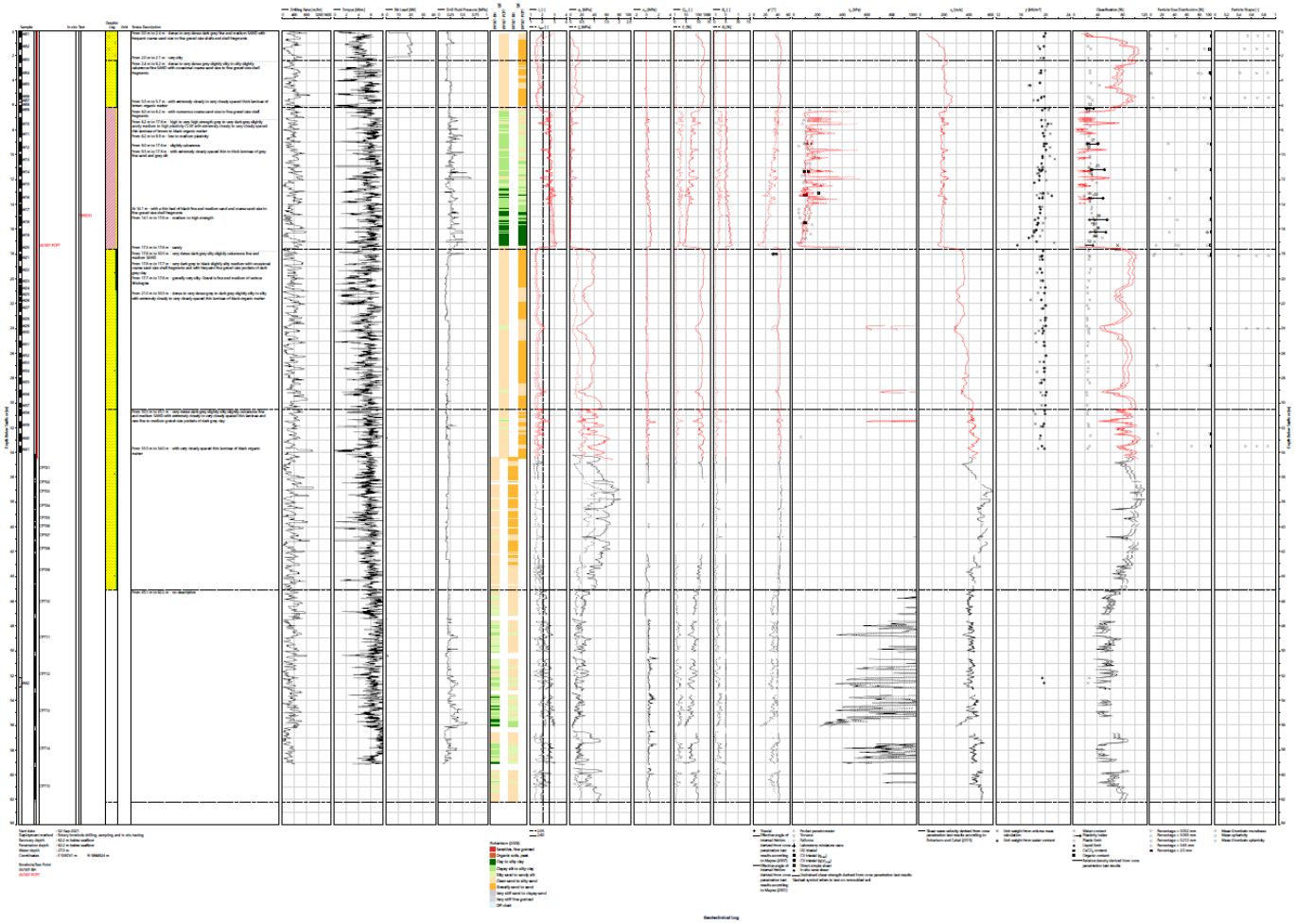


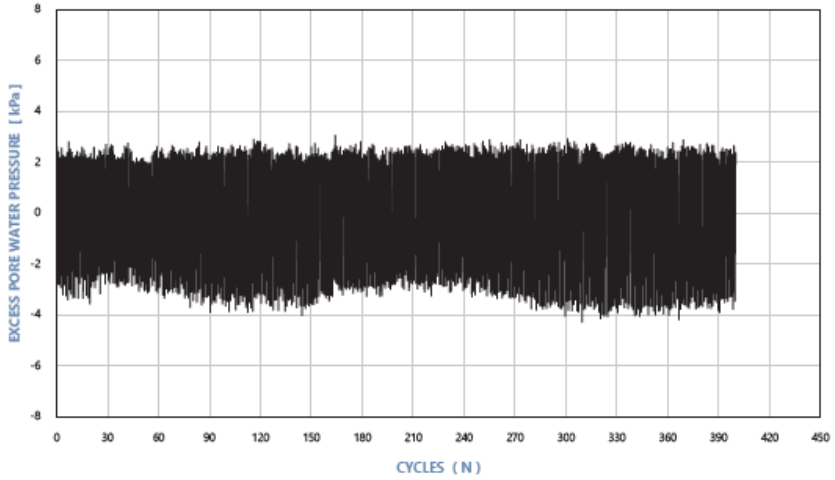


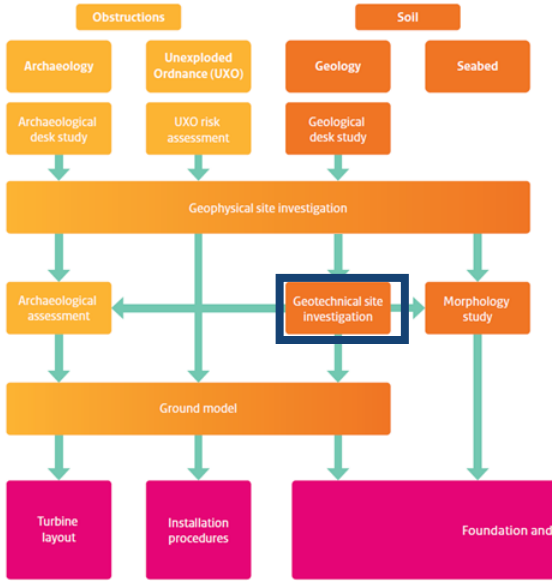


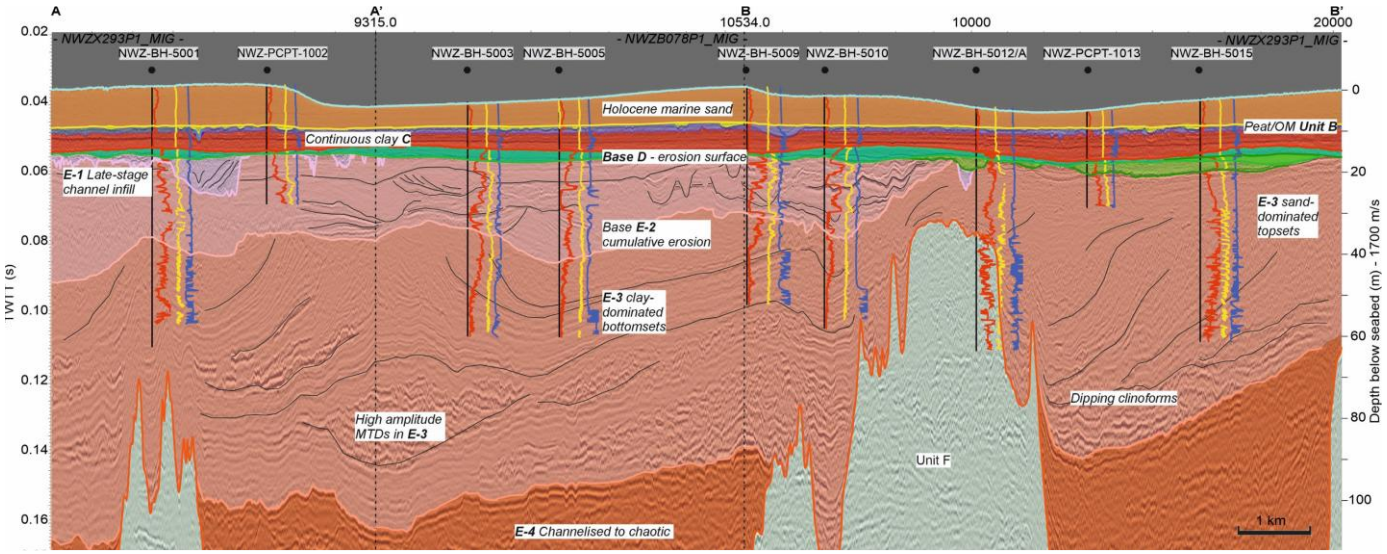
# Geotechnisch werk

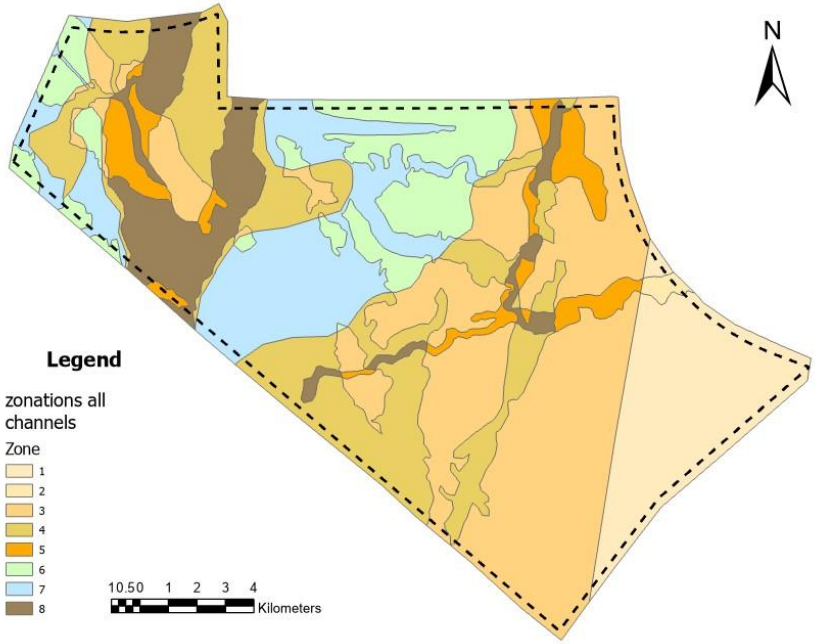


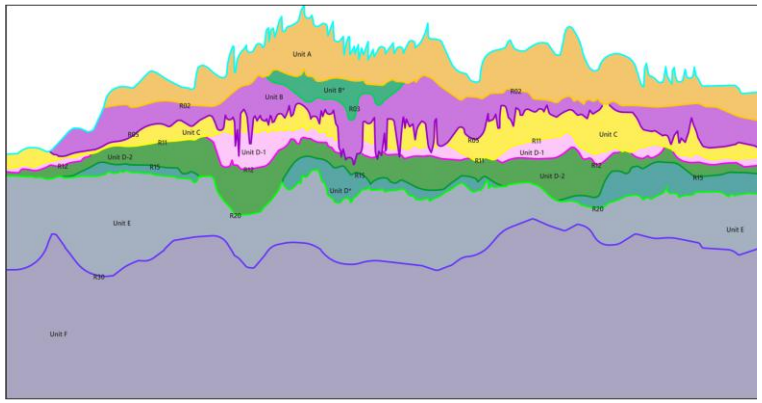


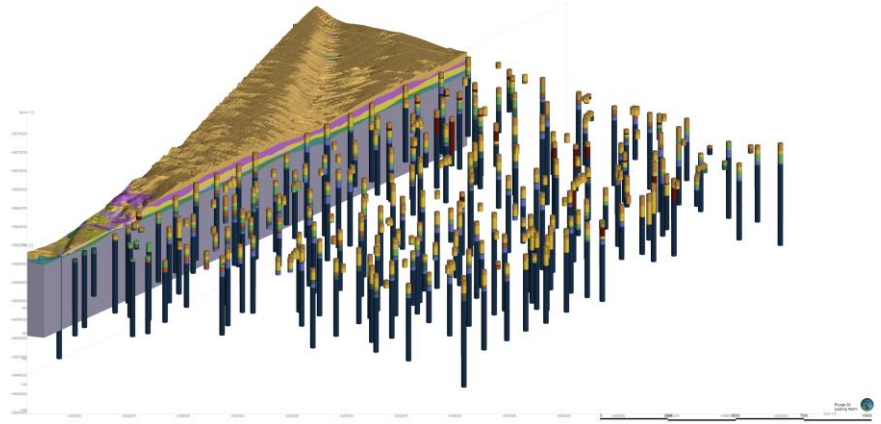



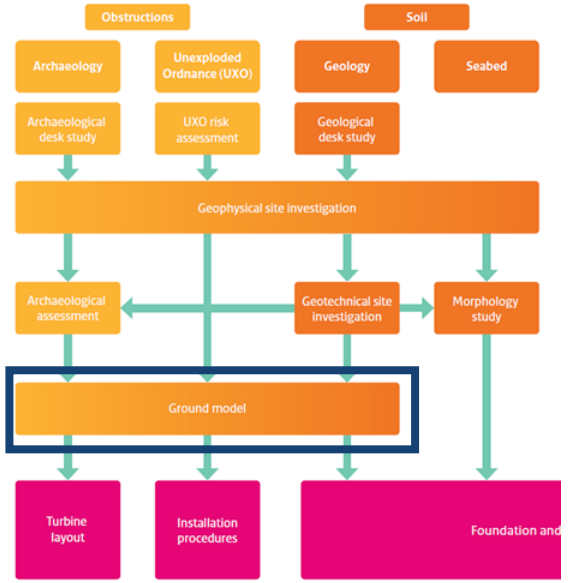
# GrondModel


A
A'
B
B'
9315.0
10534.0
10000
20000
- NWZX293P1_MIG -
- NWZB078P1_MIG1 -
- NWZX293P1_MIG -
NWZ-BH-5001
NWZ-PCPT-1002
NWZ-BH-5003
NWZ-BH-5005
NWZ-BH-5009
NWZ-BH-5010
NWZ-BH-5012/A
NWZ-PCPT-1013
NWZ-BH-5015
Holocene marine sand
Continuous clay C
Peat/OM Unit B
Base D - erosion surface
E-1 Late-stage channel infill
Base E-2 cumulative erosion
E-3 sand-dominated topsets
E-3 clay-dominated bottomsets
High amplitude MTDs in E-3
Dipping clinoforms
Unit F
E-4 Channelised to chaotic
1 km
TWT (s)
Depth below seabed (m) - 1700 m/s


N
Legend
zonations all channels
Zone
1
2
3
4
5
6
7
8
10.50 1 2 3 4
Kilometers






Obstructions
Soil
Archaeology
Unexploded Ordnance (UXO)
Geology
Seabed
Archaeological desk study
UXO risk assessment
Geological desk study
Geophysical site investigation
Archaeological assessment
Geotechnical site investigation
Morphology study
Ground model
Turbine layout
Installation procedures
Foundation and

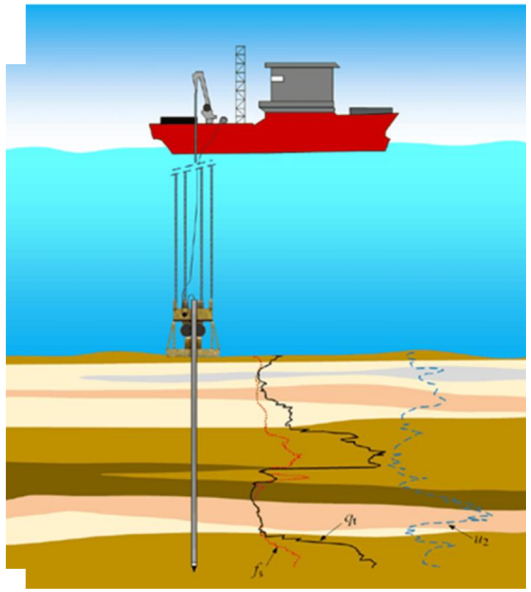
# Geotechnisch werk op zee

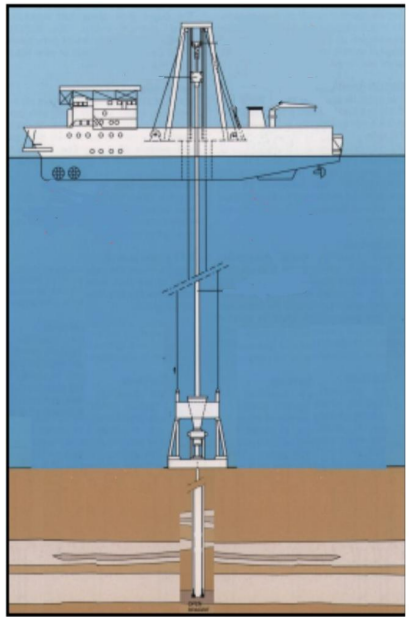


# Geotechnisch werk op zee

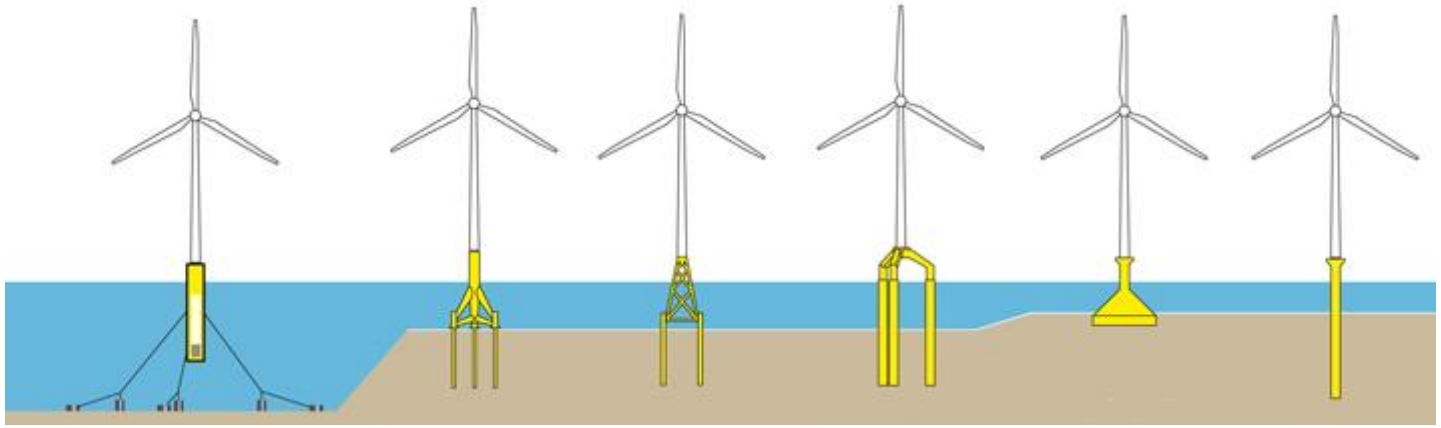
Geotechnische campagne

- Seabed Campagne
- Borehole Campagne

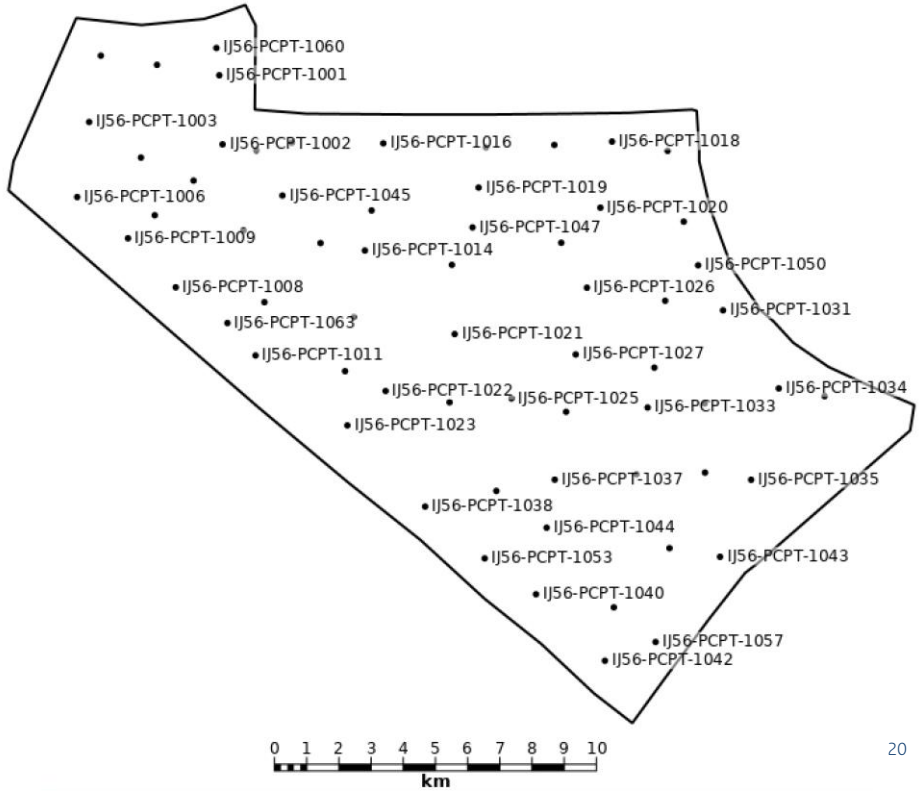




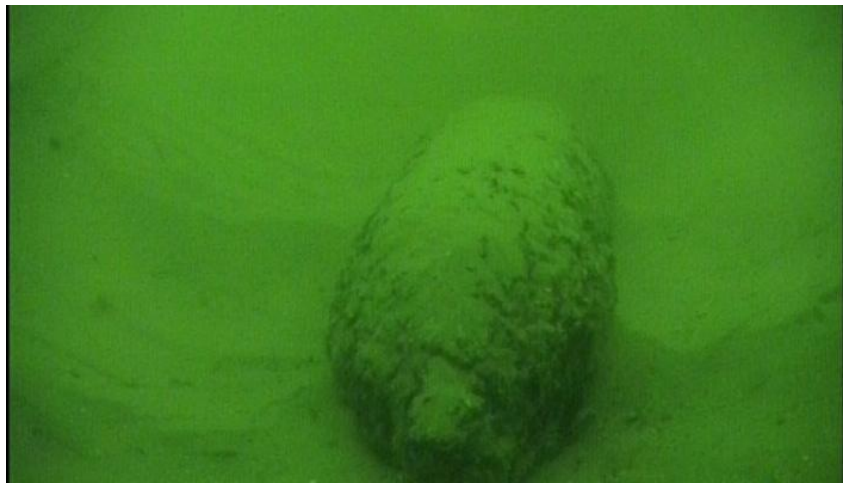
# Locaties bepalen

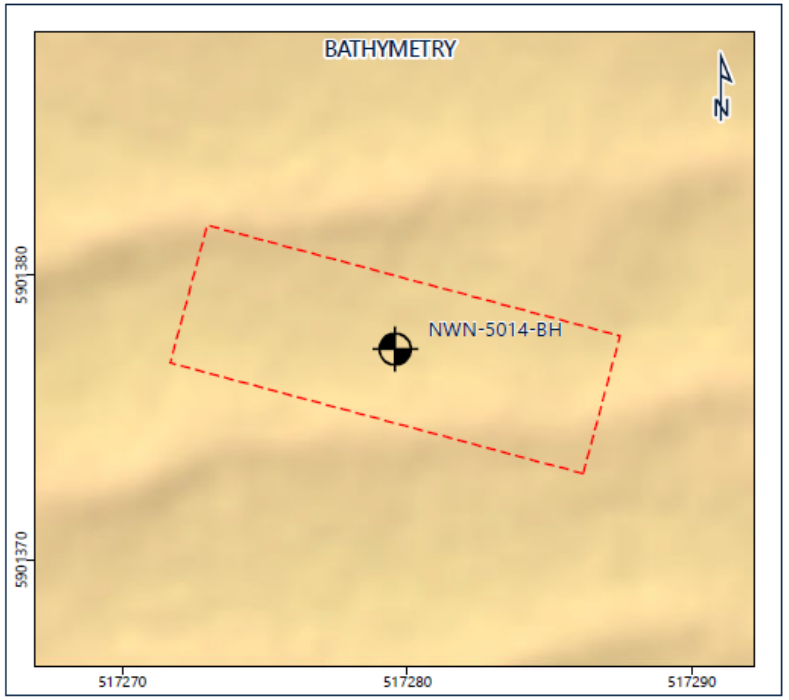


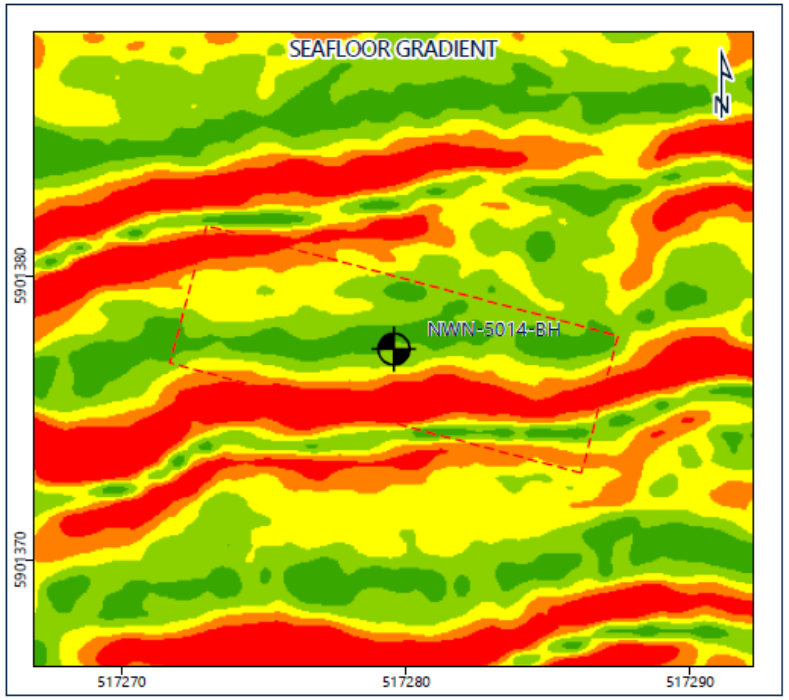


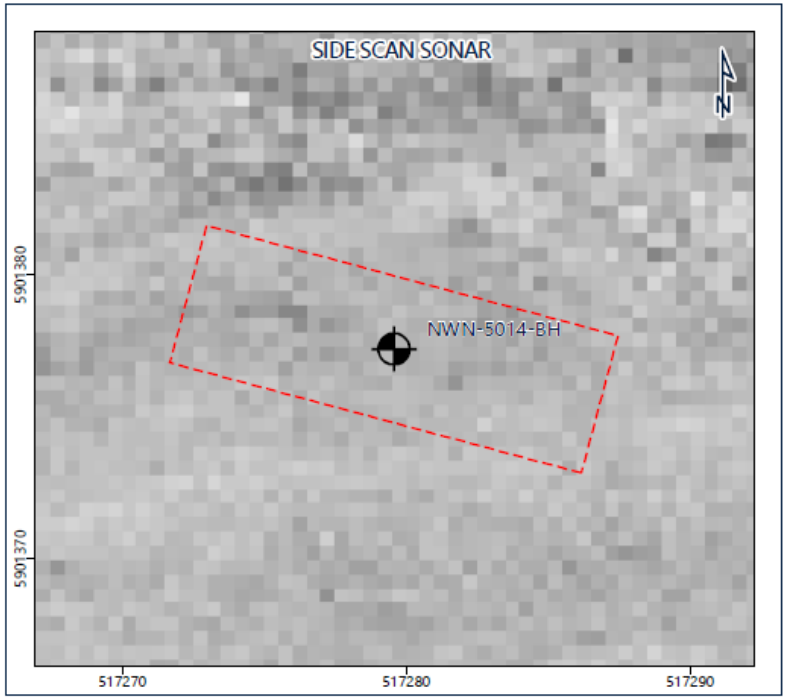



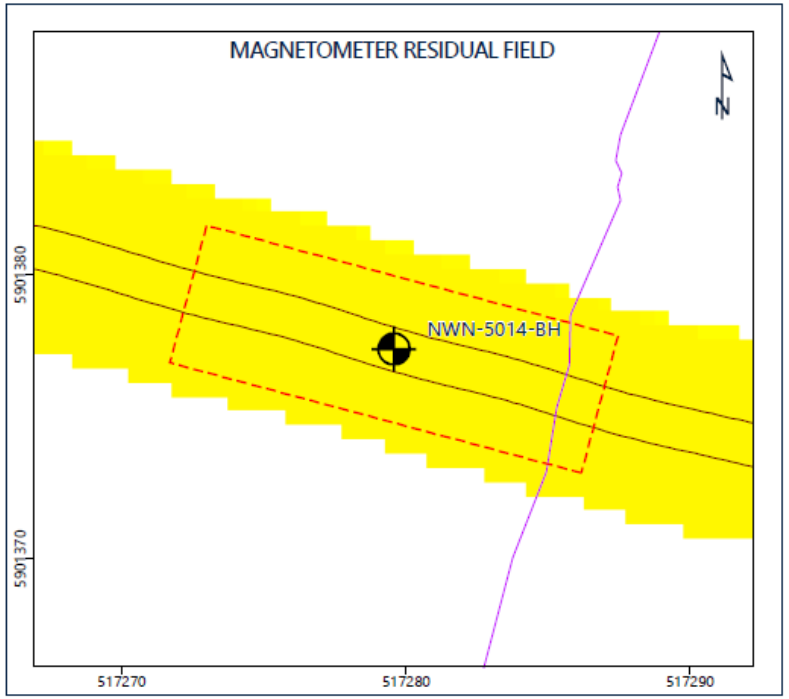
# Werk plannen



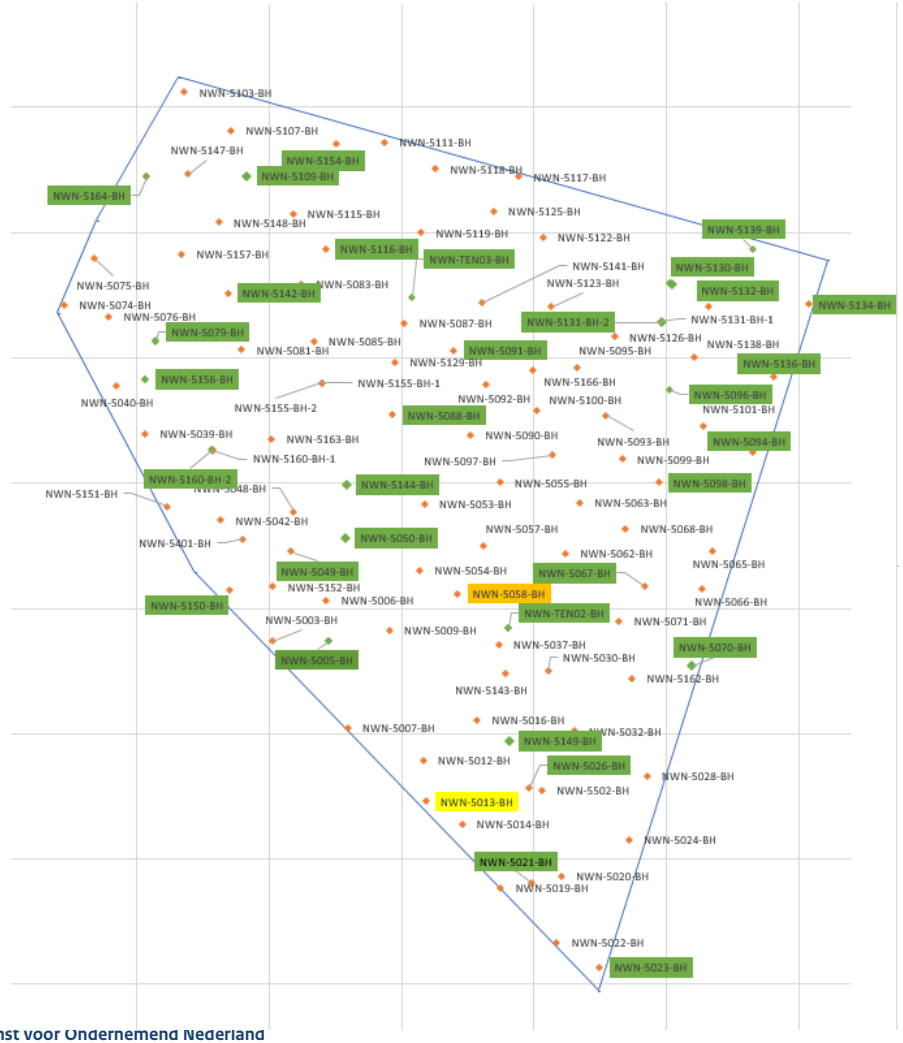


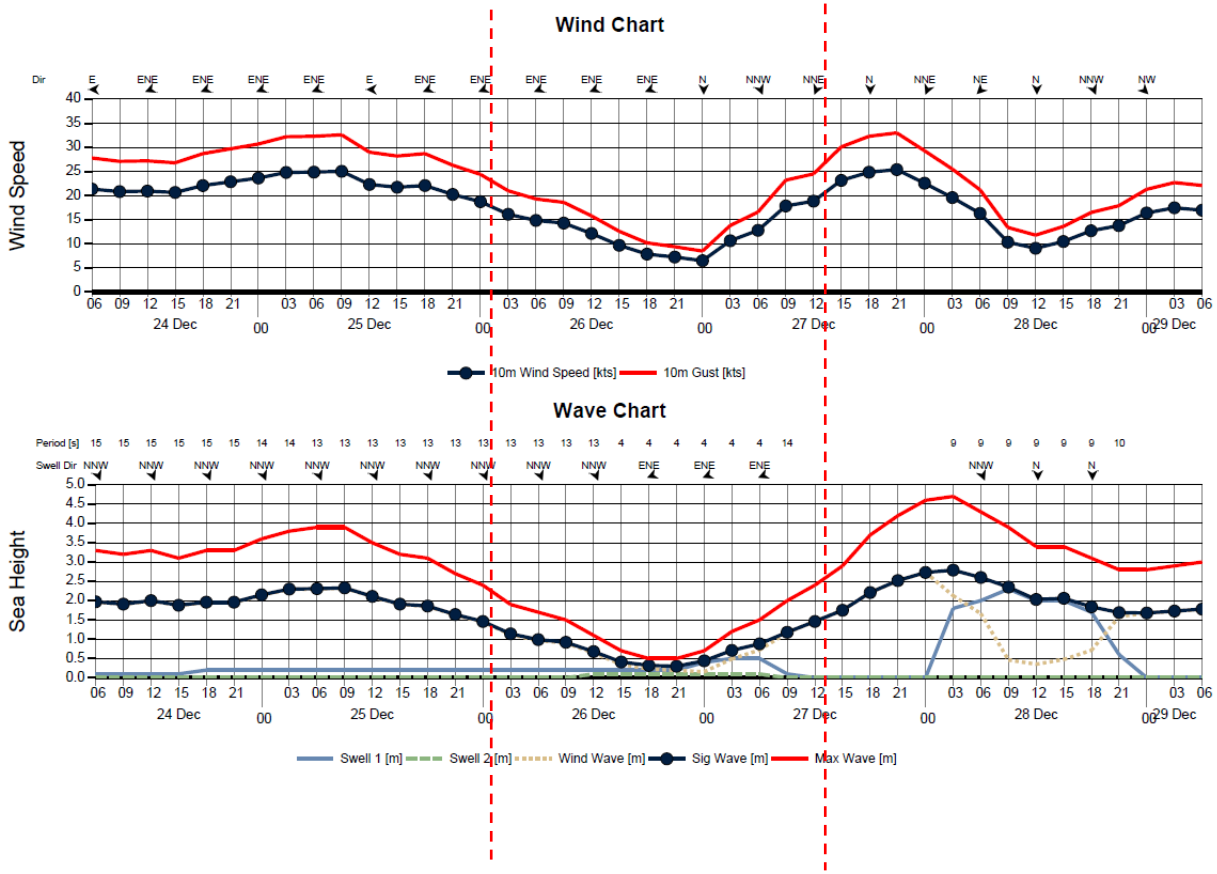



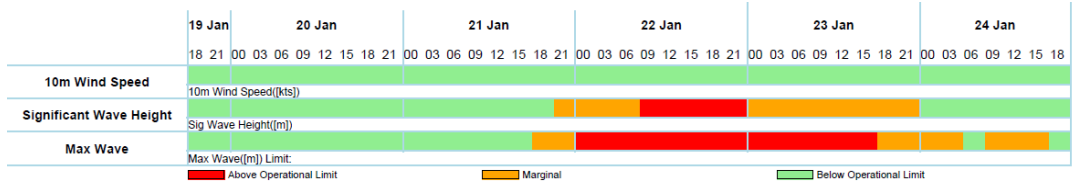



# Werk plannen en constant aanpassen

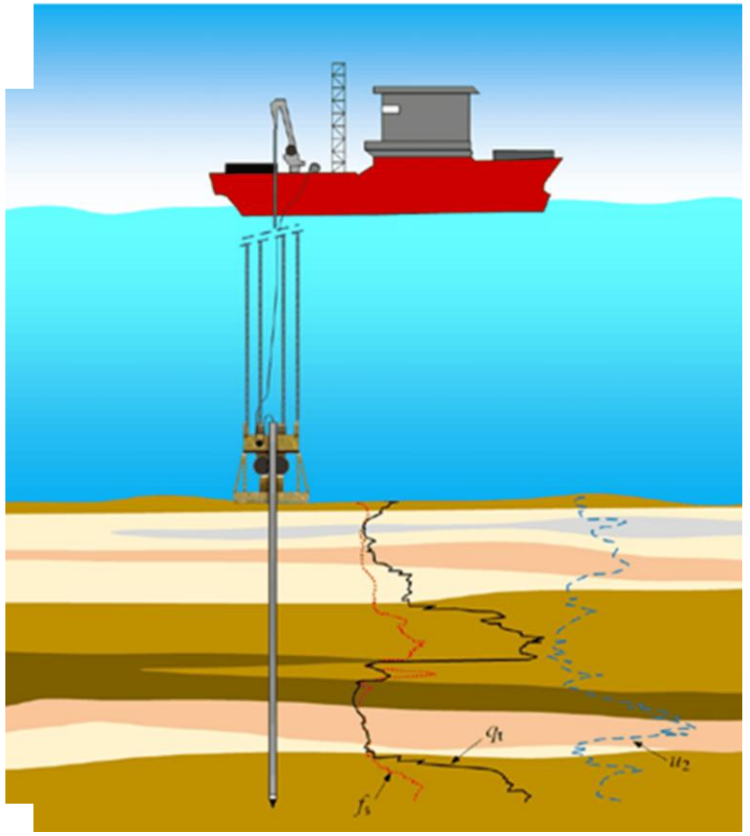


# Seabed Campagne

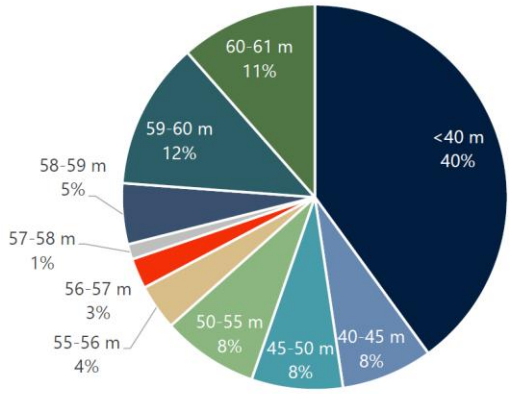




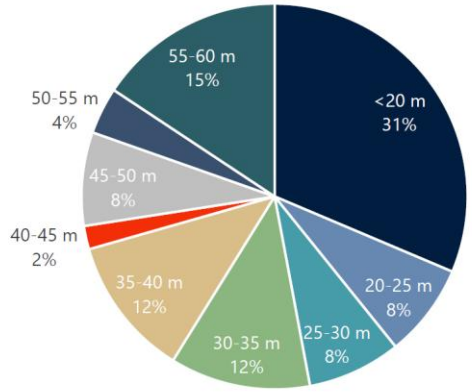


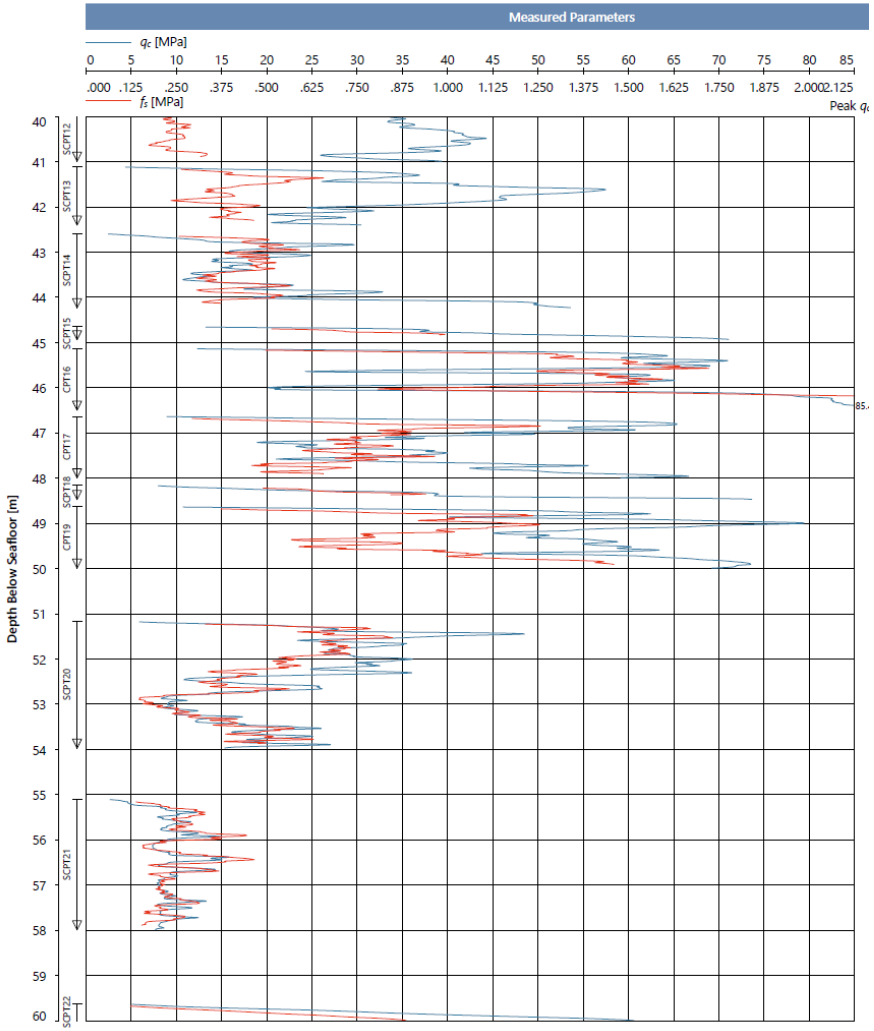
# Borehole Campagne

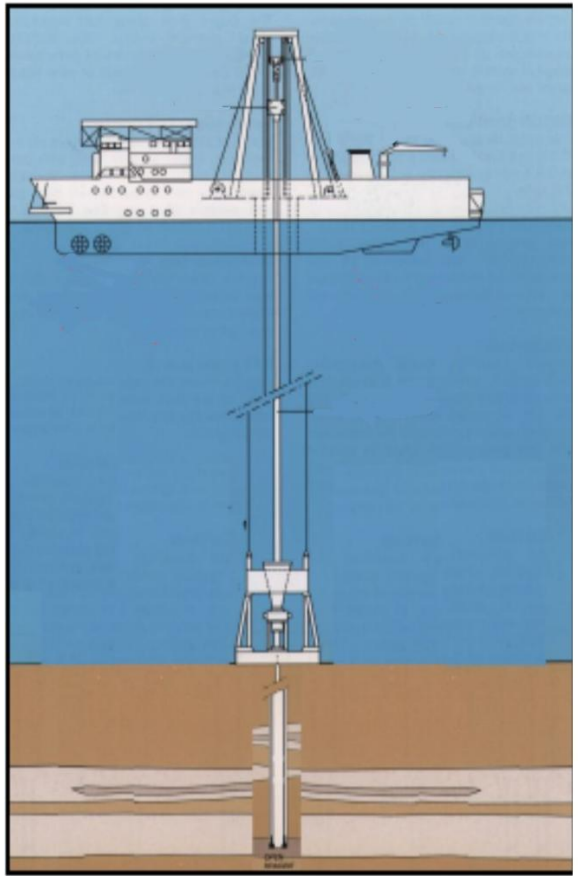
PCPT (235 locations)

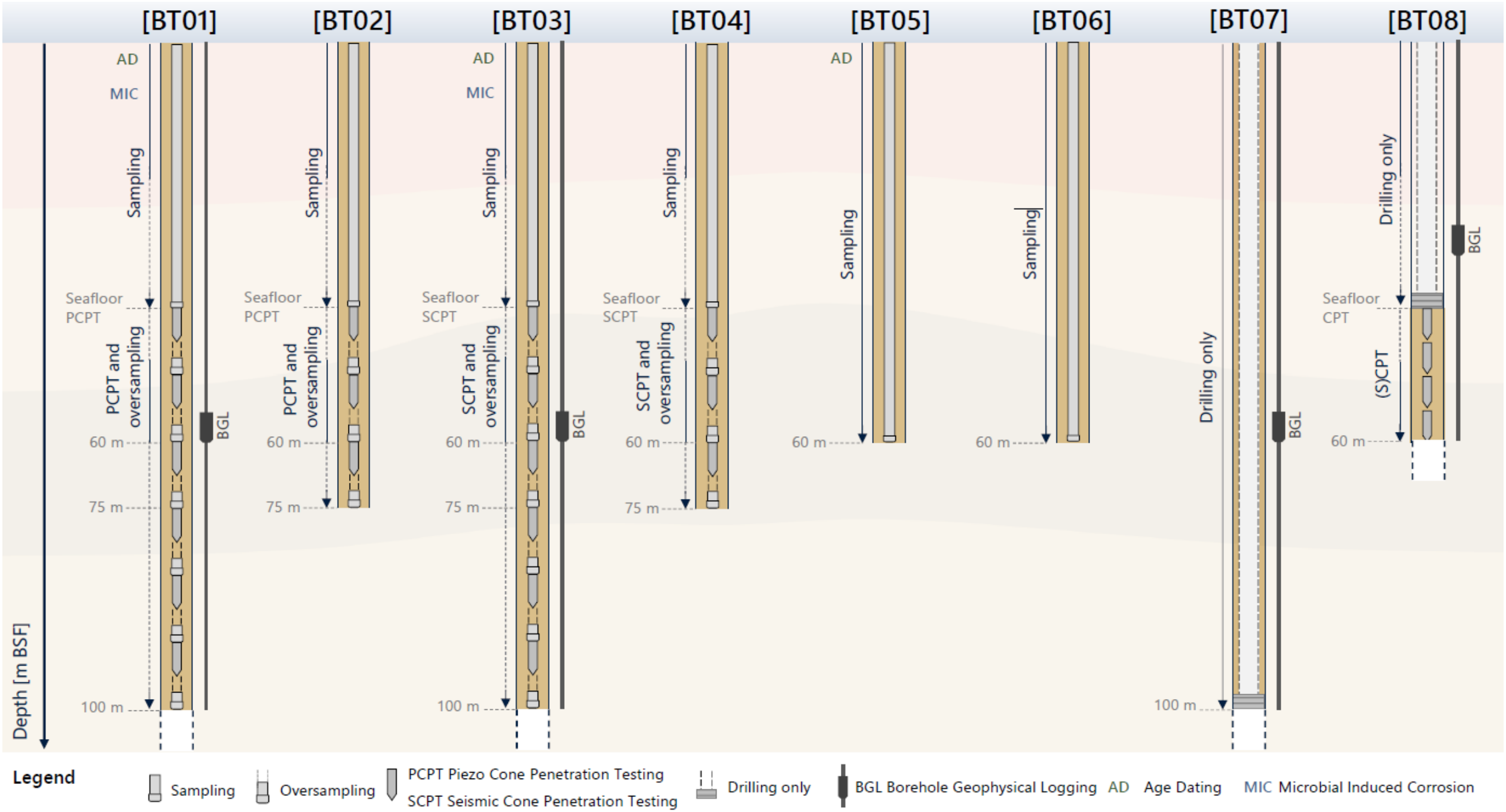


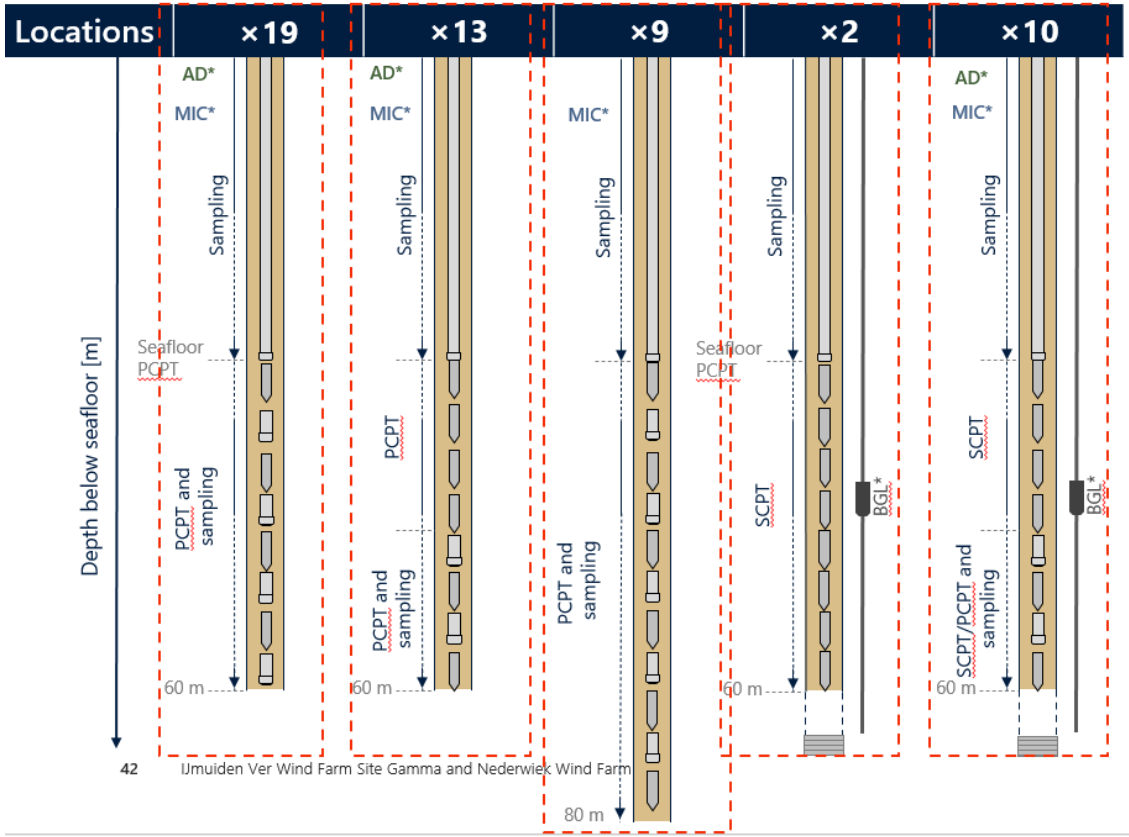

SCPT (51 locations)

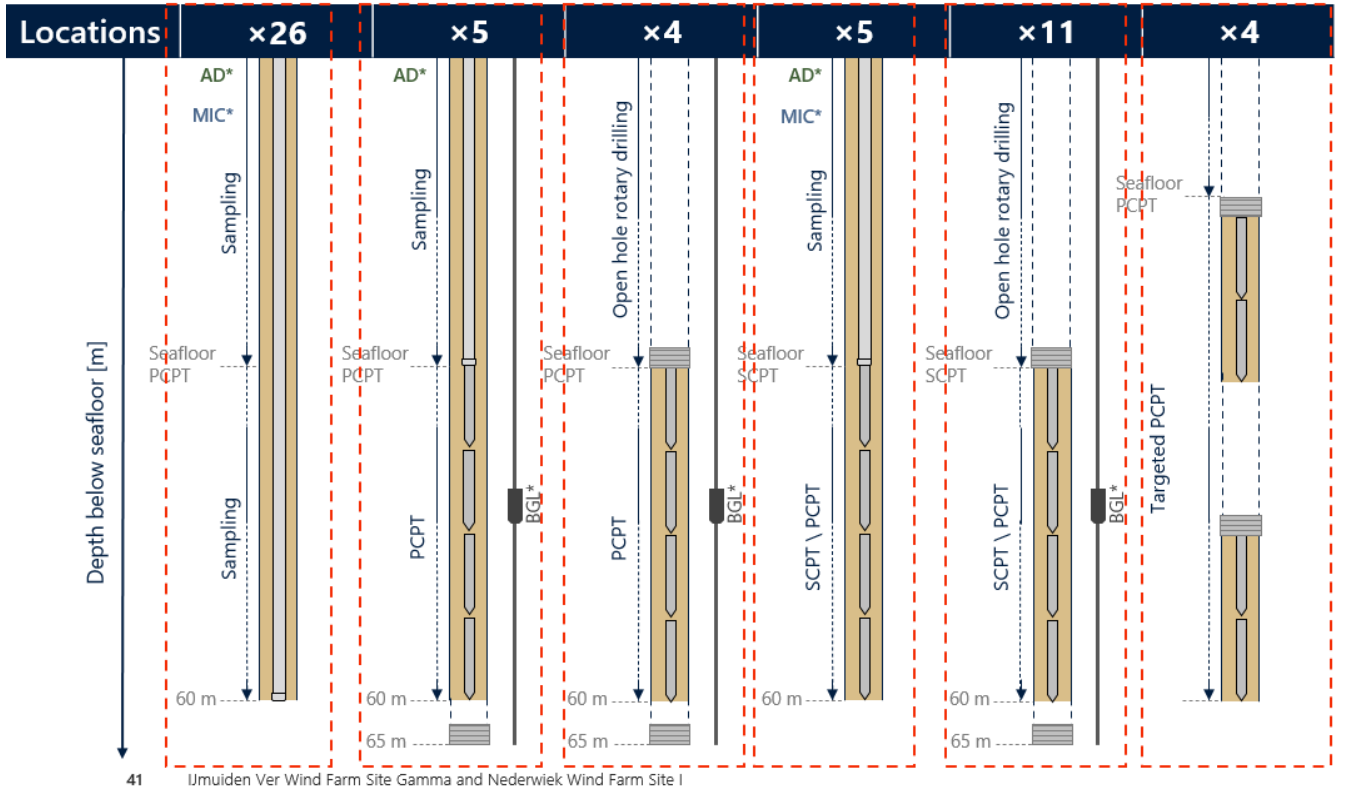


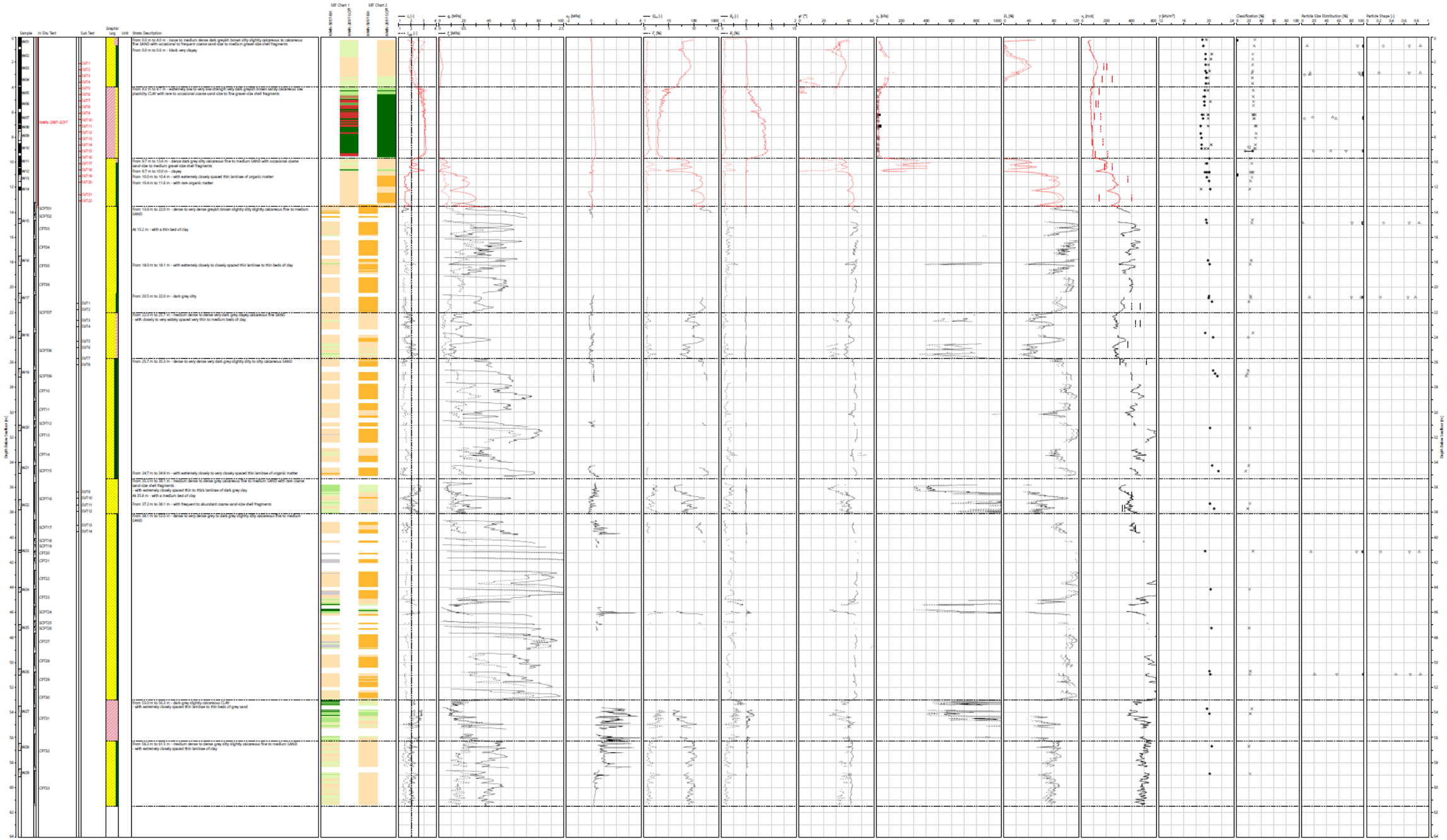



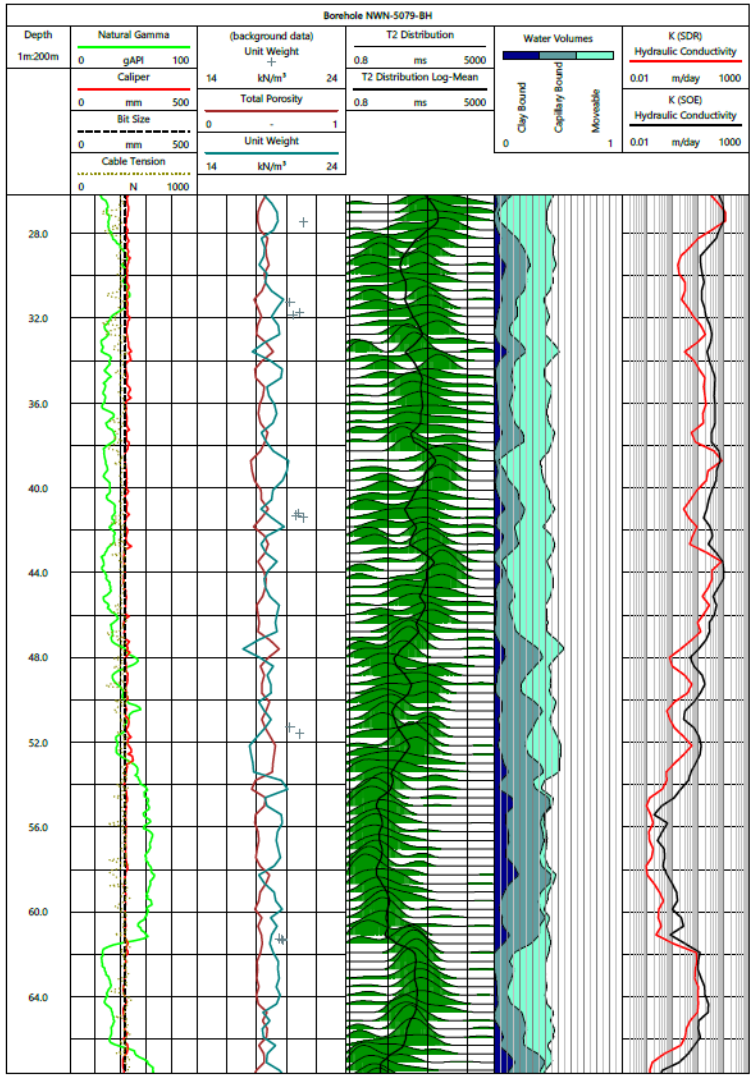

[BT01]
[BT02]
[BT03]
[BT04]
[BT05]
[BT06]
[BT07]
[BT08]
AD
MIC
Sampling
Seafloor PCPT
PCPT and oversampling
Seafloor SCPT
SCPT and oversampling
BGL
Drilling only
Seafloor CPT
(S)CPT
60 m
75 m
100 m
Depth [m BSF]
Legend
Sampling
Oversampling
PCPT Piezo Cone Penetration Testing
SCPT Seismic Cone Penetration Testing
Drilling only
BGL Borehole Geophysical Logging
AD Age Dating
MIC Microbial Induced Corrosion

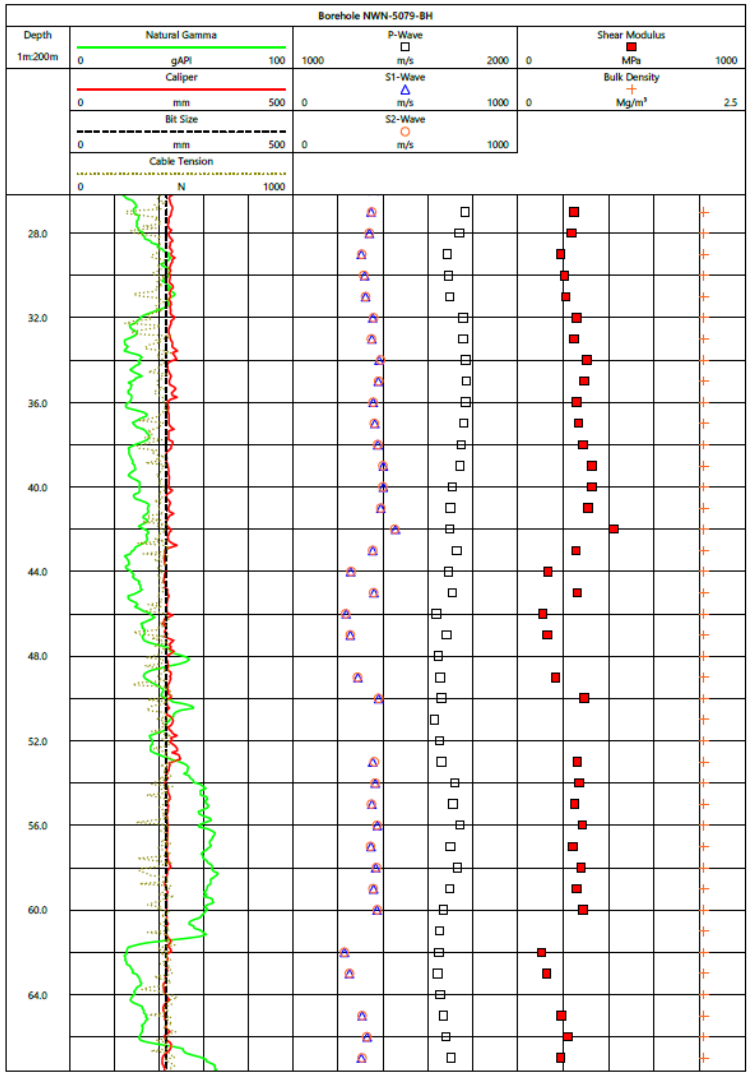

Locations
×19
×13
×9
×2
×10
AD*
MIC*
Sampling
PCPT and sampling
PCPT
SCPT
SCPT/PCPT and sampling
BGL*
Seafloor PCPT
60 m
80 m
Depth below seafloor [m]
42
IJmuiden Ver Wind Farm Site Gamma and Nederwiek Wind Farm

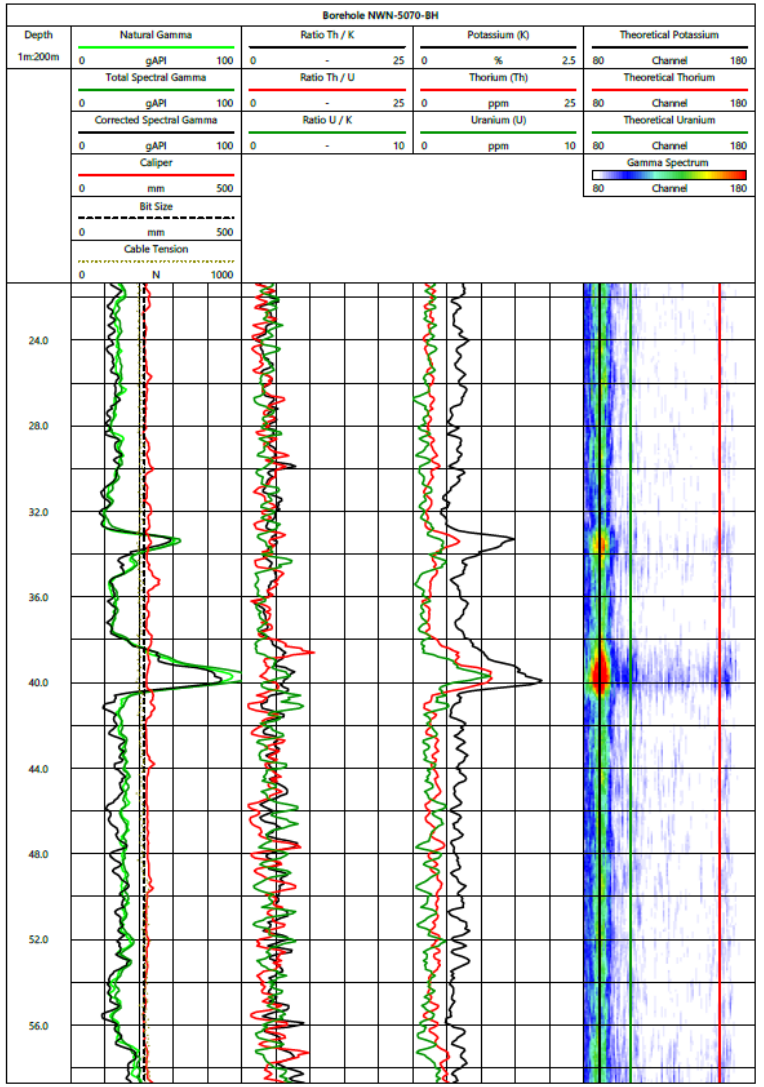

Locations
×26
×5
×4
×5
×11
×4
AD*
MIC*
Sampling
PCPT
Open hole rotary drilling
SCPT \ PCPT
BGL*
Seafloor PCPT
Seafloor SCPT
Targeted PCPT
60 m
65 m
Depth below seafloor [m]
41
IJmuiden Ver Wind Farm Site Gamma and Nederwiek Wind Farm Site I


Sample
In Situ Test
Sub Test
Graphic Log
Unit
Strata Description
SBT Chart 1
SBT Chart 2
NWN-2007-SCPT
Depth (below Seafloor [m])
Start date : 3 September 2024
Deployment method : Rotary borehole drilling, sampling and in situ testing
Recovery depth : 61.5 m below seafloor
Penetration depth : 61.5 m below seafloor
Water depth : 28.6 m
Coordinates : E 520684 m N 5916102 m
Borehole/Test Point
NWN-0267-bh
NWN-2007-SCPT
Robertson (2009)
Sensitive, fine grained
Organic soils, peat
Clay to silty clay
Clayey silt to silty clay
Silty sand to sandy silt
Clean sand to silty sand
Gravelly sand to sand
Very stiff sand to clayey sand
Very stiff fine grained
Effective angle of internal friction (1)
Effective angle of internal friction (2)
Undrained shear strength (1)
Undrained shear strength (2)
CU triaxial ($s_{u(a)}$)
CU triaxial ($s_{u(p)}$)
Pocket penetrometer
Torvane
Direct simple shear
Slashed symbol refers to test on remoulded soil
Relative density (1)
Relative density (2)
SCPT (K-channel)
SCPT (V-channel)
Shear wave velocity
Unit weight from volume mass calculation
Unit weight from water content
Water content
Plasticity Index
Plastic limit
Liquid limit
Organic content
Percentage < 0.002 mm
Percentage < 0.063 mm
Percentage < 0.2 mm
Percentage < 0.63 mm
Percentage < 2 mm
Mean Krumbein roundness
Mean sphericity
Mean Krumbein sphericity

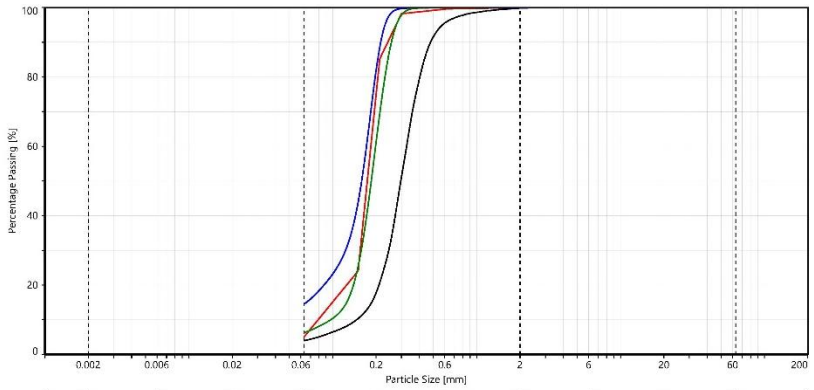
# Borehole Campagne



# Lab programma



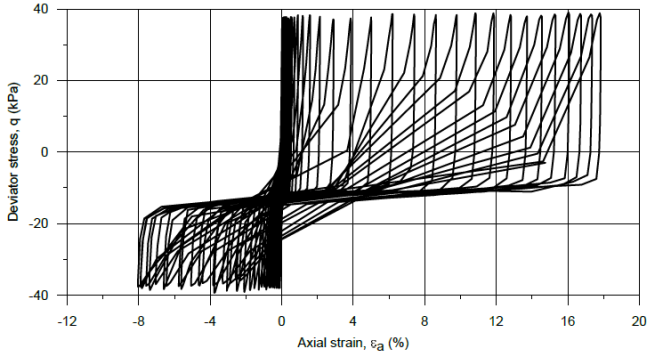

| CLAY | Fine | Medium | Coarse | Fine | Medium | Coarse | Fine | Medium | Coarse | COBBLES |
|---|---|---|---|---|---|---|---|---|---|---|
| | SILT | | | SAND | | | GRAVEL | | | |

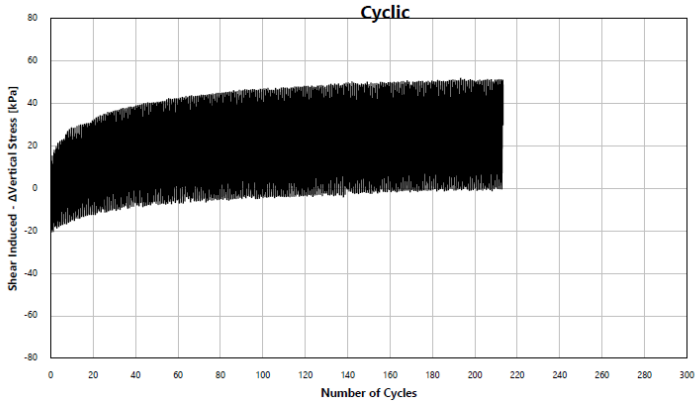
| Curve | Sample ID | Test ID | Depth BSF [m] | $D_{10}$ [mm] | $D_{30}$ [mm] | $D_{50}$ [mm] | $D_{60}$ [mm] | $D_{90}$ [mm] | $C_C$ [-] | $C_U$ [-] | Soil Fraction [%] Clay | Silt* | Sand | Gravel | Cobbles |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 13-2 | DIA1141 | 12.55 | 0.146 | 0.245 | 0.297 | 0.326 | 0.478 | 1.3 | 2.2 | - | 4 | 96 | 0 | 0 |
| | 15-1 | PSD-001 | 14.00 | 0.079 | 0.155 | 0.174 | 0.184 | 0.241 | 1.7 | 2.3 | - | 5 | 95 | 0 | 0 |
| | 16-2 | DIA1142 | 15.60 | | 0.123 | 0.159 | 0.171 | 0.215 | | | | 15 | 85 | 0 | 0 |
| | 20-2 | DIA1143 | 19.75 | 0.096 | 0.158 | 0.185 | 0.198 | 0.255 | 1.3 | 2.1 | - | 6 | 94 | 0 | 0 |

Notes
BSF : Below seafloor
$D_n$ : Particle diameter, where n % of the dry mass of soil has a smaller particle diameter
$C_U$ : Uniformity coefficient = $D_{60} / D_{10}$
$C_C$ : Curvature coefficient = $D_{30}^2 / (D_{10} * D_{60})$
* : Value represents percentage of particles < 0.063 mm. If clay fraction is '-' (composition of soil fractions < 0.063 mm not (fully) determined)
* : Value represents percentage of particles > 2 mm. If cobbles fraction is '-' (composition of soil fractions > 2 mm not (fully) determined)

Borehole or Sample Point: NWZ-BH-5003 Test method : ISO 7892-4 (2016), ISO 3322-2 (2021)

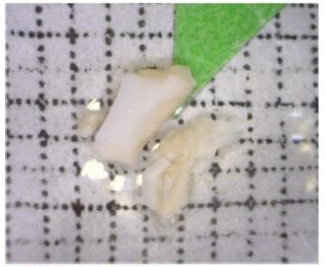
Particle Size Distribution Test Results

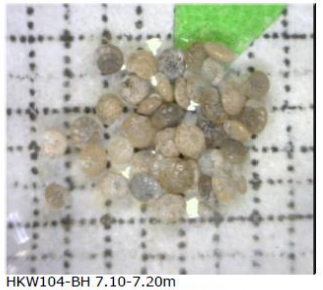


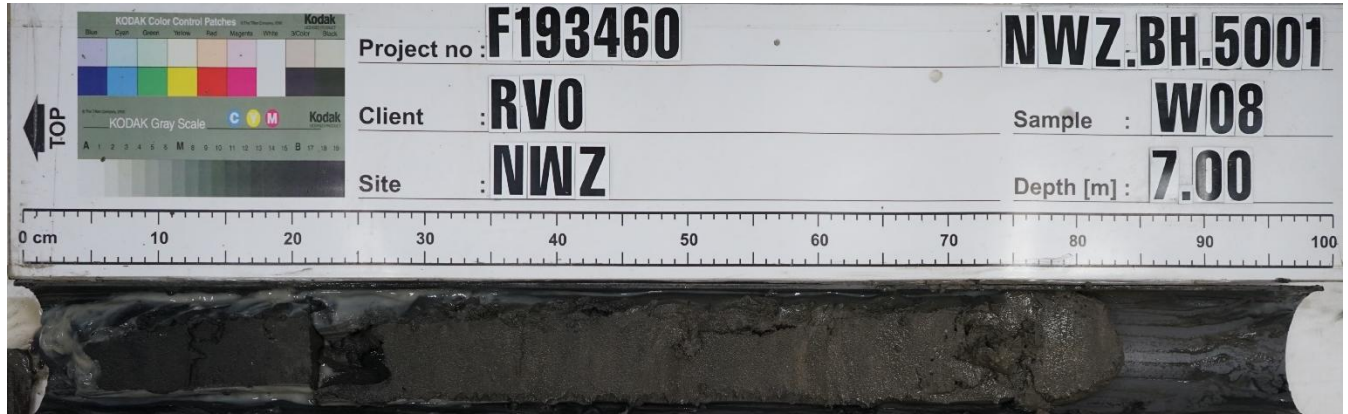


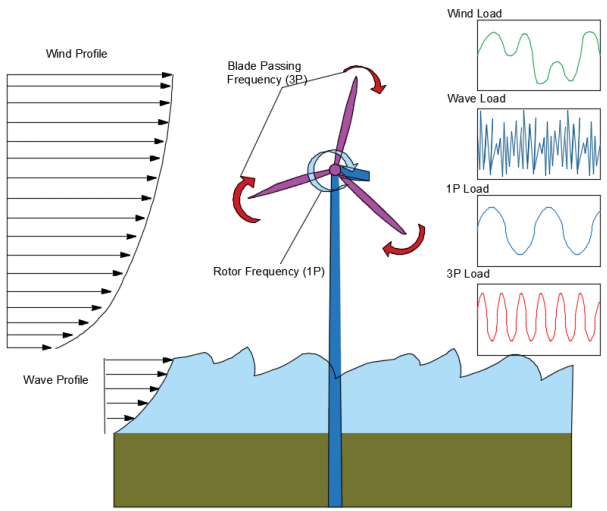
HKW077-BH 2.40-2.50m
Abraded bivalve fragments, 12.4mg analysed


HKW112-BH 0.40-45m
Abraded bivalve fragments, 8.3mg analysed


HKW104-BH 7.10-7.20m
*Ammonia batavus*, 5.5mg analysed


HKW11-BH, 3.95-4.05
Abraded shell + echinoid fragments, 6.6mg analysed

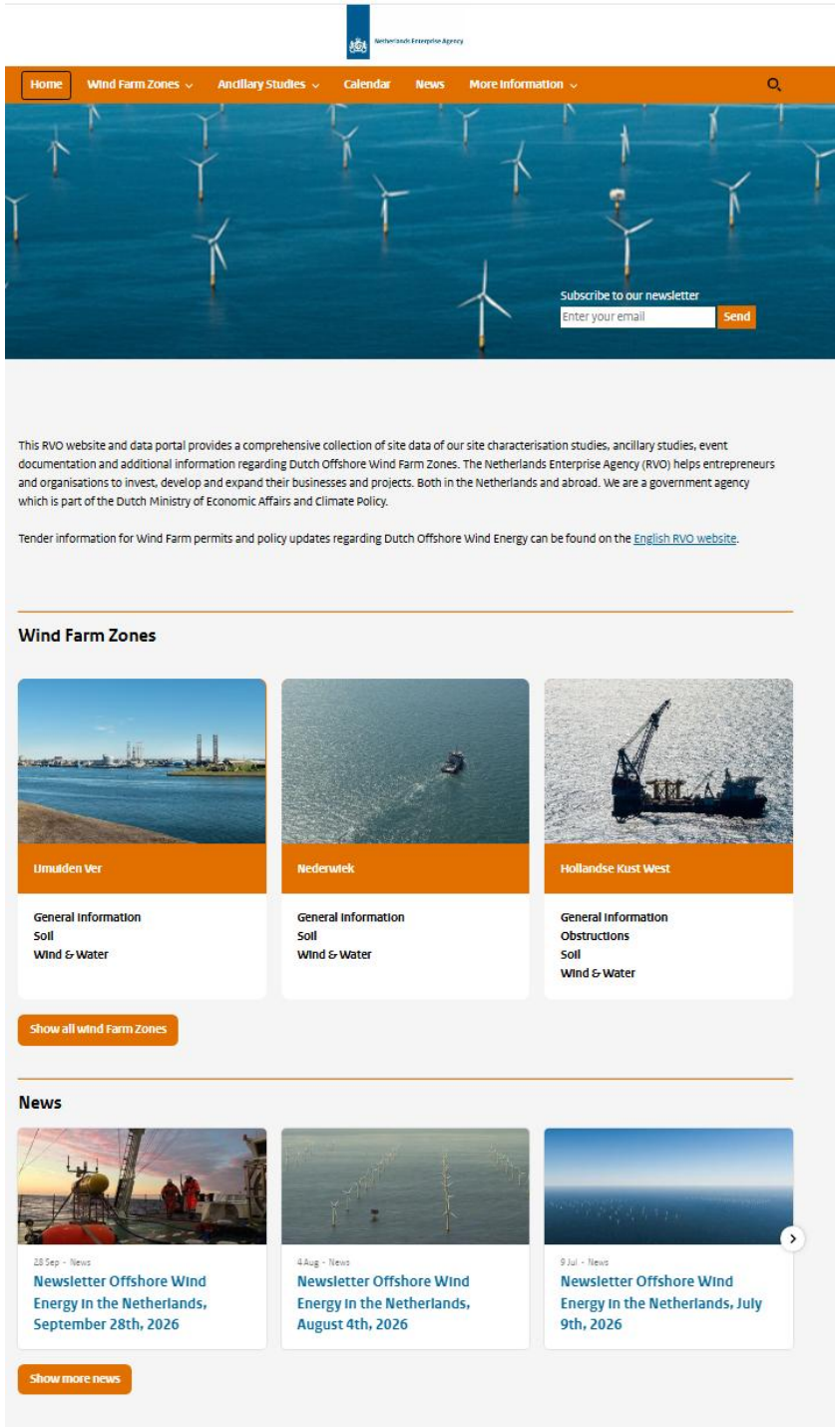


| 3 | Lab Testing |
|---|---|
| **Standard Lab Testing Programme (all soil types)** | |
| 3.1 | Natural Moisture content |
| 3.2 | Bulk density |
| 3.3 | Particle density |
| 3.4 | Degree of saturation |
| 3.5 | Carbonate tests |
| 3.6 | Organic tests (dichromate) |
| 3.7 | Organic tests (loss on ignition) |
| 3.8 | Organic and total carbon content (Elementary analysis) |
| 3.9 | Electrical resistivity (as input for heat capacity calculations) |
| 3.10 | Pore water salinity (as input for heat capacity calculations) |
| 3.11 | Microscopic photography (as input for heat capacity calculations) |
| **Standard Lab Testing Programme (cohesionless soil)** | |
| 3.12 | Binocular microscopy tests including photography (for general purpose or where batching of samples is being considered) |
| 3.13 | Particle size analysis (sieve) |
| 3.14 | Particle size analysis, including particle shape assessment (using dynamic imaging analyses, optional) |
| 3.15 | Maximum and minimum density |
| 3.16 | Permeability tests with permeameter |
| 3.17 | Permeability tests in triaxial cell (using a CID test sample) |
| 3.18 | Permeability tests in triaxial cell (as a standalone test) |
| 3.19 | Thermal conductivity tests on fully-saturated cohesionless samples using needle probe (ASTM D5334-14) |
| 3.20 | Thermal conductivity tests on fully-saturated cohesionless samples using "Hot disc" method (Method 2: ISO 220007-2.2008) |
| 3.21 | Constant Rate of Strain (CRS) compressibility tests on reconstituted samples (max. 4 days) |
| 3.22 | Overdays Constant Rate of Strain (CRS) compressibility tests |
| 3.23 | Isotropically consolidated drained (CID) triaxial compression tests (N.B. one "test" constitutes three individual sub-tests on three specimens at three different consolidation pressures) - including pre-shearing at 400 cycles. |
| 3.24 | Isotropically consolidated drained (CID) triaxial compression tests (N.B. one "test" constitutes three individual sub-tests on three specimens at three different consolidation pressures) - without pre-shearing. |
| 3.25 | Isotropically consolidated drained (CID) triaxial compression tests (N.B. one "test" constitutes three individual sub-tests on one specimens at three different consolidation pressures, i.e. multi-stage single) - with pre-shearing 400 cycles. |
| 3.26 | Isotropically consolidated drained (CID) triaxial compression tests (N.B. one "test" constitutes three individual sub-tests on one specimens at three different consolidation pressures, i.e. multi-stage single) - without pre-shearing. |
| 3.27 | Cyclic pre-shear of CID triaxial specimen, including one consolidation phase, 400 cycles and reporting. |
| 3.28 | Direct simple shear (DSS) test, including one consolidation phase and total test duration of 3 days. |
| 3.29 | Cyclic pre-shear of DSS specimen, including one consolidation phase, 400 cycles and reporting. |
| 3.30 | Additional consolidation stage for DSS test, only if the extra consolidation stage causes item 3.23 to exceed duration of 3 days. |
| 3.31 | Ring shear tests (soil/soil) |
| 3.32 | Ring shear tests (soil/steel) - ICP method |
| 3.33 | Bender element tests (as part of a CID or DSS test) |
| 3.34 | Consolidated drained direct shear (shear box) tests (N.B. one "test" constitutes three individual sub-tests on three specimens at three different normal pressures) |
| 3.35 | Consolidated drained direct shear (shear box) tests (N.B. one "test" constitutes three individual sub-tests on one specimen at three different normal pressures; mult-stage) |
| 3.36 | Microbially Influenced Corrosion (MIC) testing |
| **Standard Lab Testing Programme (cohesive soil)** | |
| 3.37 | Particle size analysis (using hydrometer for fines and if applicable sieve) |
| 3.38 | Atterberg limits (liquid and plastic limits, cone method) |
| 3.39 | Permeability tests in triaxial cell (using a CIU test sample) |
| 3.40 | Thermal conductivity tests on fully-saturated undisturbed cohesive samples using needle probe (ASTM D5334-14) |
| 3.41 | Thermal conductivity tests on fully-saturated remoulded cohesive samples using needle probe (ASTM D5334-14) |
| 3.42 | Thermal conductivity tests on fully-saturated undisturbed cohesive samples using "Hot disc" method (Method 2: ISO 220007-2.2008). |
| 3.43 | Thermal conductivity tests on fully-saturated remoulded cohesive samples using "Hot disc" method (Method 2: ISO 220007-2.2008). |
| 3.44 | One-dimensional consolidation (oedometer) tests up to 8 load and 4 unload stages (state whether BS or Norwegian method) |
| 3.45 | Additional reload loops in one-dimensional consolidation (oedometer) tests |
| 3.46 | Constant Rate of Strain (CRS) compressibility tests (max. 4 days) |
| 3.47 | Overdays Constant Rate of Strain (CRS) compressibility tests |
| 3.48 | Unconsolidated undrained (UU) triaxial compression tests on undisturbed samples |
| 3.49 | Unconsolidated undrained (UU) triaxial compression tests on remoulded samples |
| 3.50 | Isotropically consolidated undrained triaxial compression test (CIU) (comprising saturation, consolidation and shearing, max. 4 days) |
| 3.51 | Overdays Isotropically consolidated undrained triaxial compression test (CIU) |
| 3.52 | Anisotropically consolidated undrained triaxial compression test (CAUc) (comprising saturation, consolidation and shearing, max. 4 days) |
| 3.53 | Overdays anisotropically consolidated undrained triaxial compression test (CAUc) |
| 3.54 | Anisotropically consolidated undrained triaxial extension test (CAUe) (comprising saturation, consolidation and shearing, max. 4 days) |
| 3.55 | Overdays anisotropically consolidated undrained triaxial extension test (CAUe) |
| 3.56 | Cyclic pre-shearing of triaxial sample, 400 cyles |
| 3.57 | Direct simple shear (DSS) test, including one consolidation phase and total test duration of 3 days. |
| 3.58 | Cyclic pre-shear of DSS specimen, including one consolidation phase, 400 cycles and reporting. |
| 3.59 | Additional consolidation stage for DSS test, only if the extra consolidation stage causes item 3.51 to exceed duration of 3 days. |
| 3.60 | Ring shear tests (soil/soil) |
| 3.61 | Ring shear tests (soil/steel) |
| 3.62 | Bender element tests (as part of the CIU, CAU or DSS test) |
| 3.63 | Microbially Influenced Corrosion (MIC) testing |
| **Standard Lab Testing Programme (Age Dating)** | |
| 3.64 | Palynology analysis |
| 3.65 | Analysis of Algae |
| 3.66 | Analysis of Fungi |
| 3.67 | Analysis of Spores |
| 3.68 | Nanno- or micro-fossil analysis including Dinoflagellate Cysts and Foraminifera |
| 3.69 | Botanical macroremains |
| 3.70 | Ostracods and foraminifera |
| 3.71 | Macroplants |
| 3.72 | Carbon dating analysis |
| 3.73 | Mollucs |
| 3.74 | Diatoms |
| 3.75 | OSL |
| ~~3.76~~ | No longer applicable |
| **Advanced Lab Testing Programme (Cyclic and dynamic tests)** | |
| 3.77 | Cyclic direct simple shear tests (CSS) with pre-shearing (including three test stages as per SoW; cohesionless soils; under "drained" or "undrained" conditions) |
| 3.78 | Cyclic direct simple shear tests (CSS) without pre-shearing (including two test stages as per SoW; cohesionless or cohesive soils; under "drained" or "undrained" conditions) |
| 3.79 | CSS extra loading stage (up to 1500 load cycles; cohesionless or cohesive soils; under "drained" or "undrained" conditions) |
| 3.80 | Post cyclic static testing to failure if cyclic CSS test failure does not occur |
| 3.81 | Cyclic triaxial compression tests (CTX) (including three test stages as per SoW; cohesionless or cohesive soils; under "drained" or "undrained" conditions) |
| 3.82 | CTX extra loading stage (up to 1500 load cycles; cohesionless or cohesive soils; under "drained" or "undrained" conditions) |
| 3.83 | Post cyclic static testing to failure if cyclic CTX test failure does not occur |
| 3.84 | Resonant column (RC) test (including initial loading and repeat loading as per SoW; cohesionless and cohesive samples; under "drained" or "undrained" conditions) |
| 3.85 | RC extra loading stage (cohesionless and cohesive samples; under "drained" or "undrained" conditions) |
| **Advanced Lab Testing Programme (Classification and static reference tests)** | |
| 3.86 | Particle size distribution analyses (sieve) (for batch samples) |
| 3.87 | Microscopic photography (for batch samples) |
| 3.88 | Direct simple shear test, constant volume or constant stress (N.B. only one specimen tested under one set of conditions) |
| 3.89 | Isotropically consolidated drained (CID) triaxial compression tests (N.B. only one specimen tested under one consolidation pressure) |
| 3.90 | (An)isotropically consolidated undrained triaxial compression test (CIUc/CAUc) (comprising saturation, consolidation and shearing, max. 4 days) |
| 3.91 | Overdays (an)isotropically consolidated undrained triaxial compression test (CAUc) |
| 3.92 | Anisotropically consolidated undrained triaxial extension test (CAUe) (comprising saturation, consolidation and shearing, max. 4 days) |
| 3.93 | Overdays anisotropically consolidated undrained triaxial extension test (CAUe) |

# Offshore data in de BRO



# Wat zit er nu op dit moment in

Seabed CPT data van:

- IJmuiden Ver Gamma
- Nederwiek I
- Hollandse Kust West VIII

BRO | Basisregistratie Ondergrond

Home | Actueel | Inhoud BRO | Werken met de BRO | Doe mee | Praktijk | Service & contact

Home > Actueel > Nieuws > Dankzij RVO meer zeebodem in de BRO

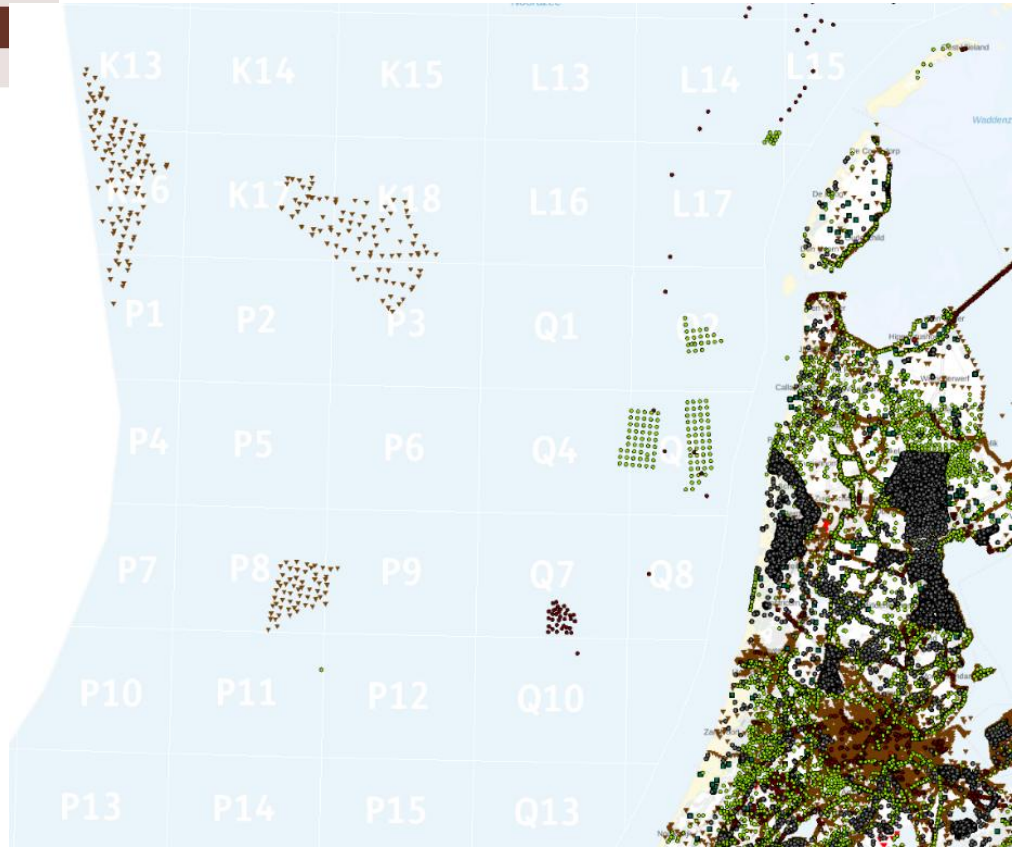
## Dankzij RVO meer zeebodem in de BRO

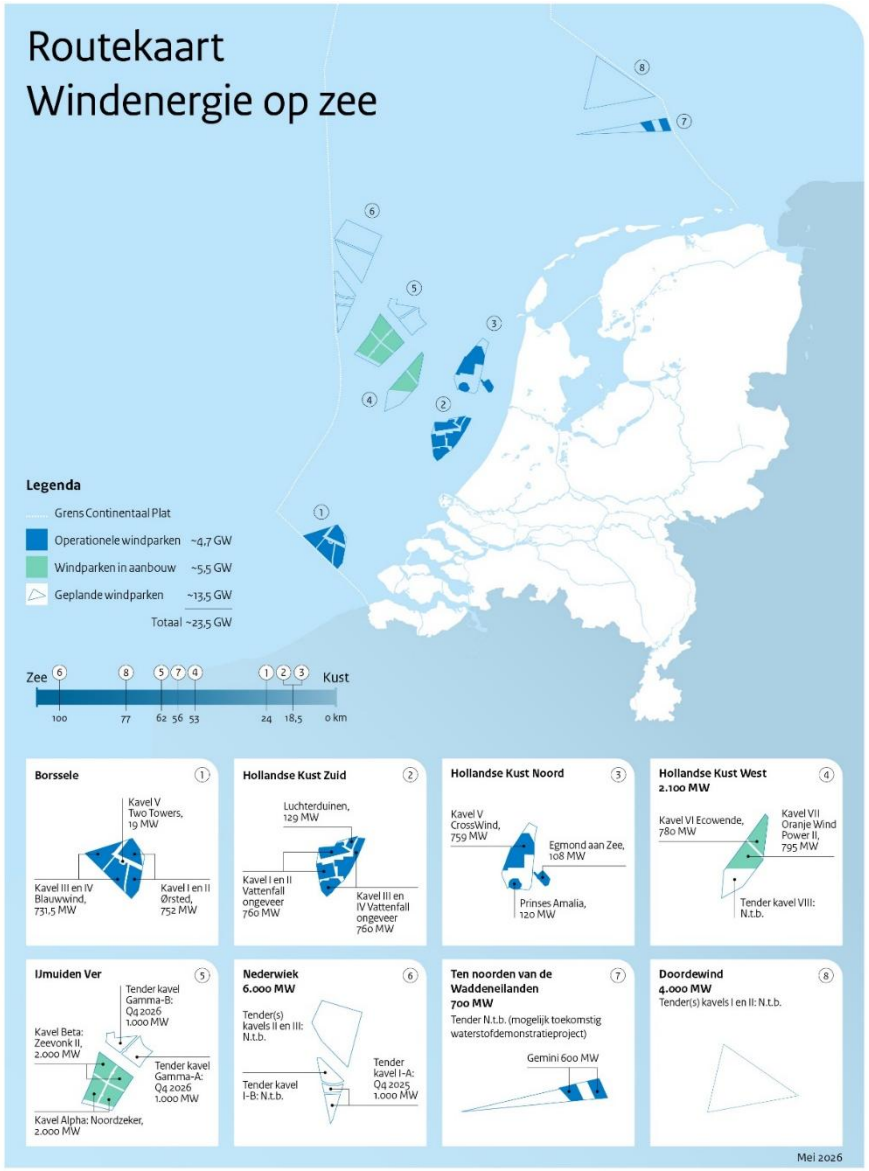
Gepubliceerd 24 juni 2026

De Rijksdienst voor Ondernemend Nederland (RVO) doet locatiestudies op de Noordzee voor toekomstige offshore windparken. Deze boringen en sonderingen leveren waardevolle data van de zeebodem op. Daardoor is weer een stuk zeebodem beter in beeld. Willen we dat weten? Ja zeker! Ook maritieme, oftewel 'offshore gegevens', moeten bij de BRO aangeleverd en gebruikt worden.

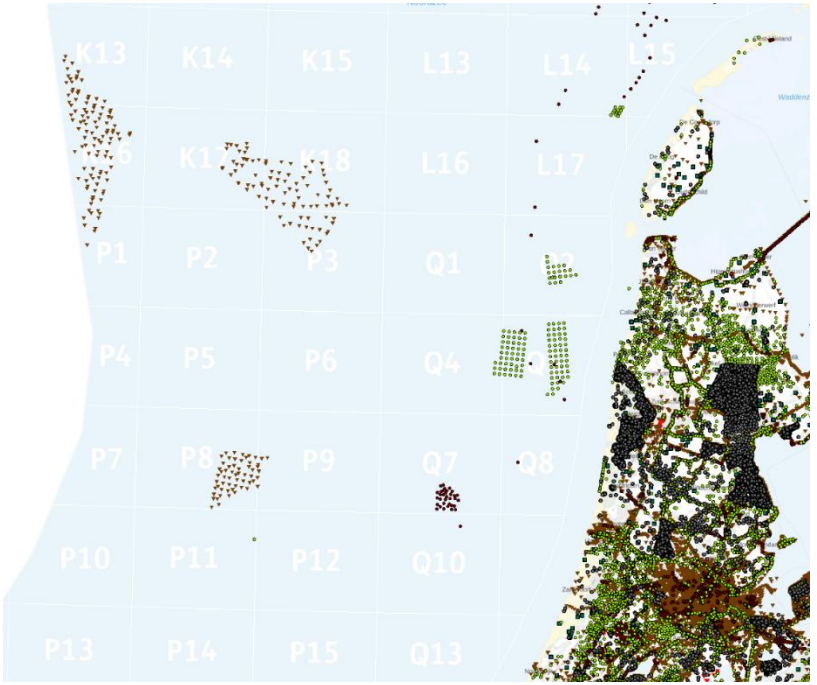


*Foto: RVO*






# Wat komt er aan?



# Wat voegt RVO toe voor de BRO




Met de BRO kunnen we data van de Noordzee publiek beter toegankelijk maken.

Voorbeelden van toepassingen:

- Medegebruik /onderhoud in Windpark
- Werkzaamheden nabij windpark
- GeoTOP model NCP



# Waar lopen we nog tegenaan

- RVO  heeft nog veel meer data die in de toekomst hopelijk ook in de BRO kunnen.

→ Waardevol als die data ook in BRO kan

- Verschil in offshore en land. Denk aan NL codes vs INT codes.

- Doelgroep Wind op zee niet bekend met BRO (internationale spelers)

Rijksdienst voor Ondernemend Nederland

# Bedankt

Filmpjes
1) Grond Model TNW

2) Grond Model IJmuiden Ver Gamma

3) Grond Model IJmuiden Ver Alpha-Beta




## Heb je nog vragen?

https://offshorewind.rvo.nl

woz@rvo.nl

Energietransitie.nl