



## Webinar January 24, 2017 Geotechnical Assessment HKZ WFS I&II

### **Questions: from the audience**

**Answers given by: Martijn Klein (Fugro), Sven Plasman (Fugro), Bogusia Klosowska (Fugro), Erik Schoute (Fugro), John Carey (Wind Support), Ben de Sonnevill (BLIX), Ruud de Bruijne (Netherlands Enterprise Agency)**

**Question:** Is it possible for the interested parties to have access to the raw geophysical data packages?

**Answer:** The geophysical data is available on a HDD which can be ordered by using the order form on <http://offshorewind.rvo.nl> or send an email to [woz@rvo.nl](mailto:woz@rvo.nl) with your contact details.

**Question:** Will the slides be made available?

**Answer:** The slides have been made available on, 25<sup>th</sup> January, at [www.offshorewind.rvo.nl](http://www.offshorewind.rvo.nl).

**Question:** The geotechnical digital data, including the AGS/ASCII files, have not yet been made available. When do you expect to upload this package and what format?

**Answer:** The geotechnical digital data is available now on a flash drive, these can be ordered by sending an email with your contact details to: [woz@rvo.nl](mailto:woz@rvo.nl)

**Question:** Are the geotechnical data included in the Kingdom Project on the flash drive?

**Answer:** CPT cone resistance data at each geotechnical location is loaded into the Kingdom project, which is available on the flash drive. The ASCII/AGS files of each CPT are also found on the same flash drive.

**Question:** Is it the intention no additional CPTs will be performed or does this only account for the sampling boreholes?

**Answer:** It is the intention to minimize the quantity of necessary sampling boreholes in follow up stages. We assume that in the second phase a developer will perform additional CPTs at each wind turbine location.

**Question:** Are the seismic CPTs only downhole or also seabed CPTs?

**Answer:** Only downhole.

**Question:** Was the complete SI for WFS1 + 2 carried out in 31 days or just WFS I?

**Answer:** The complete fieldwork for WFS I&II was carried out in 31 days.

**Question:** Can the CPT data also be delivered as raw data (or stacked time traces). We can benefit from our own interpretation.

**Answer:** For this project, delivery of CPT raw data is not part of the standard digital deliverables package. RVO.nl will discuss with Fugro whether (raw/stacked) SCPT data can be made available.

**Question:** How much (in percentage) of undisturbed samples from the boreholes are left for additional testing in future?

**Answer:** This question can only be answered at a later stage as this percentage is not readily available at this moment.

**Question:** How deep reach the seabed CPTs in average. Are downhole CPTs performed up to deeper depths?

**Answer:** Seafloor CPTs have been performed to an average depth of approximately 50 m BSF; Downhole CPTs have been performed up to 65 m BSF.

**Question:** Are we allowed to contact the relevant people from Fugro to ask about some details about the way of operation/performance of tests - if needed?

**Answer:** You are free to contact Fugro. Fugro will answer questions related to this assessment using the information made publicly available.

**Question:** What strain intervals are the CSS test results plotted for? For the graphs of number of cycles vs CSR that have been presented.

**Answer:** In general, the number of cycles to reach failure (defined as 15% cyclic strain) has been plotted on these charts. However, for some tests, failure was not reached after applying the maximum number of cycles (either 400 or 1500, depending on cyclic phase). It is noted that most of the tests on Unit A did not reach failure, which is why several loads levels have the same number of cycles (1500).

**Question:** Do the authors think there is a significant risk of boulders at the site from geophysical/geotechnical data? And if so in which units?

**Answer:** There were no indications of boulders from/during geophysical and geotechnical surveys, however, possible presence of boulders cannot be entirely excluded.

**Question:** When will the morphodynamic study be available? (Pg 31)

**Answer:** This study has already been published on our website <http://offshorewind.rvo.nl/soilzh>