



GENERAL REQUIREMENTS FOR MEASUREMENT MASTS

- All sensor boom dimensions should be compliant with IEC 61400 – 12 – 1:2017 standard.
- As built dimensions of the met mast should be supplied by the vendor after installation, as a separate chapter of the installation report.
- All the sensors should be calibrated according to MEASNET standards and the calibration certificates should be included in the installation report
- Measurement mast should be 120 m in height, which dictates that the top two anemometers in fork configuration are both at 120 m height. The dimensions of the fork configuration should comply with the IEC 61400 – 12 – 1:2017 standard.
- The measurement mast should be equipped with 6 anemometers at 120 m, 120 m, 114 m, 84 m, 60 m, and 30 m heights. All anemometers should be Thies First Class anemometers.
- The measurement mast should be equipped with 3 wind direction sensors at 114 m, 84 m, and 60 m. All direction sensors should be Thies direction sensors.
- All booms for an instrument should be supported with a support structure to reduce vibration.
- The measurement mast should be equipped with an adequate lightning protection system and earthed with an earthing rod.
- The measurement mast should have concrete foundation at the mast point. The guy wires should also be connected to the ground using concrete foundations.
- The measurement mast should be equipped with two temperature sensors. One temperature sensor should be around 4 m above ground, and the upper temperature sensor should be installed below the last module of the met mast. As built height of the temperature sensors should be documented on the installation report.
- The measurement mast should also be equipped with one pressure sensor and one relative humidity sensor. As built heights of these sensors should be documented on the installation report.
- Temperature, pressure, and relative humidity sensors should also have a calibration documentation included in the installation report.
- The datalogger time should be setup as UTC - 0 (Local time). This should also be documented on the installation report.
- Measurements should be recorded in 10-minute intervals.
- Datalogger should send data to specified e-mail addresses daily.
- Maintenance visits to the measurement masts should be carried out in every three months and a maintenance report should be prepared.

Legend

Figure Title

Figure 4: General Arrangement of Met Mast

Project Name

Artfield Forest Wind Farm
For Planning

Project Number

1620008937

Figure No.

4

Date

January 2022

Prepared By

CO

Scale

Not to scale

Issue

1

Client

Artfield Forest Wind Farm Ltd

RAMBOLL