

### Noise Survey Record Sheet

<b>Project No.</b>	3959	<b>Project Name:</b>	HoS/Torrance Ext
<b>Location (x of y)</b>	1	<b>Installed By:</b>	MT/PB
<b>Lat/Long</b>	55.86911, -3.76862	<b>Location Name</b>	Hill Farm
<b>Start Date</b>	23/02/2022	<b>Start Time</b>	1520

Equipment Details	Make/Model	Serial No.
<b>Sound Level Meter:</b>	Rion NL-52	510132
<b>Calibrator:</b>	Rion NC-74	35105087
<b>Source of Equipment:</b>	Arcus	
<b>Meter Timestamp (Start/End, GMT/BST):</b>	Start GMT	

<b>Description of Location:</b>	Garden to side of house, shielded from prevailing wind to some extent by trees
<b>Distance from façade::</b>	>5m
<b>Noise sources observed:</b>	Motorway traffic, rainfall, wind in trees
<b>Additional notes:</b>	0

#### Installation (Visit 1)

<b>Date:</b>	23/02/2022	<b>Time:</b>	1520
<b>Filename:</b>	101	<b>Calibration level:</b>	94.0
<b>Range setting:</b>	20-130	<b>Meas. period:</b>	10min
<b>Freq weighting:</b>	A	<b>Rain Gauge?</b>	Yes
<b>Notes:</b>	0		

#### Visit 2

<b>Date:</b>	17/03/2022	<b>Time:</b>	1000
<b>Visited by:</b>	PB	<b>Calibration level:</b>	94.0
<b>Level pre-calibration</b>	93.8	<b>Batts replaced?</b>	No
<b>Equipment Removed?</b>	Yes		
<b>Notes:</b>	Overcast, high winds, dry. Only wind noise audible.		

### Noise Survey Record Sheet - Photos

<b>Project No.</b>	3959	<b>Location (x of y)</b>	1
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### Noise Survey Record Sheet

<b>Project No.</b>	3959	<b>Project Name:</b>	HoS/Torrance Ext
<b>Location (x of y)</b>	2	<b>Installed By:</b>	MT/PB
<b>Lat/Long</b>	55.87447, -3.75784	<b>Location Name</b>	Craigholm Farm
<b>Start Date</b>	23/02/2022	<b>Start Time</b>	1550

Equipment Details	Make/Model	Serial No.
<b>Sound Level Meter:</b>	Rion NL-52	1276548
<b>Calibrator:</b>	Rion NC-74	35105087
<b>Source of Equipment:</b>	Arcus	
<b>Meter Timestamp (Start/End, GMT/BST):</b>	Start GMT	

<b>Description of Location:</b>	Garden to rear of property
<b>Distance from façade::</b>	>3.5m
<b>Noise sources observed:</b>	Rain noise, traffic on adjacent road, motorway in distance, wind in trees
<b>Additional notes:</b>	Rain and wind

#### Installation (Visit 1)

<b>Date:</b>	23/02/2022	<b>Time:</b>	1550
<b>Filename:</b>	201	<b>Calibration level:</b>	94.0
<b>Range setting:</b>	20-130	<b>Meas. period:</b>	10min
<b>Freq weighting:</b>	A	<b>Rain Gauge?</b>	No
<b>Notes:</b>	Rain and wind		

#### Visit 2

<b>Date:</b>	17/03/2022	<b>Time:</b>	1140
<b>Visited by:</b>	PB	<b>Calibration level:</b>	94.0
<b>Level pre-calibration</b>	93.8	<b>Batts replaced?</b>	No
<b>Equipment Removed?</b>	Yes		
<b>Notes:</b>	Dry, overcast, strong winds. Traffic, trees and aircraft audible.		





### Noise Survey Record Sheet

<b>Project No.</b>	3959	<b>Project Name:</b>	HoS/Torrance Ext
<b>Location (x of y)</b>	3	<b>Installed By:</b>	MT/PB
<b>Lat/Long</b>	55.86812, -3.74691	<b>Location Name</b>	Netherton Farm
<b>Start Date</b>	23/02/2022	<b>Start Time</b>	1640

Equipment Details	Make/Model	Serial No.
<b>Sound Level Meter:</b>	Rion NL-52	231668
<b>Calibrator:</b>	Rion NC-74	35105087
<b>Source of Equipment:</b>	ANV	
<b>Meter Timestamp (Start/End, GMT/BST):</b>	Start GMT	

<b>Description of Location:</b>	Garden in front of the house
<b>Distance from façade::</b>	3.5m
<b>Noise sources observed:</b>	Heavy rain and wind
<b>Additional notes:</b>	0

#### Installation (Visit 1)

<b>Date:</b>	23/02/2022	<b>Time:</b>	1640
<b>Filename:</b>	301	<b>Calibration level:</b>	94.0
<b>Range setting:</b>	30-130	<b>Meas. period:</b>	10min
<b>Freq weighting:</b>	A	<b>Rain Gauge?</b>	Yes
<b>Notes:</b>	0		

#### Visit 2

<b>Date:</b>	17/03/2022	<b>Time:</b>	1040
<b>Visited by:</b>	PB	<b>Calibration level:</b>	94.0
<b>Level pre-calibration</b>	94.0	<b>Batts replaced?</b>	No
<b>Equipment Removed?</b>	Yes		
<b>Notes:</b>	Dry, overcast, strong winds. Traffic noise predominant.		

**Note:** No photos of this location are available due to data loss.

### Noise Survey Record Sheet

<b>Project No.</b>	3959	<b>Project Name:</b>	HoS/Torrance Ext
<b>Location (x of y)</b>	4	<b>Installed By:</b>	MT
<b>Lat/Long</b>	55.85807, -3.77204	<b>Location Name</b>	95 Edinburgh road
<b>Start Date</b>	24/02/2022	<b>Start Time</b>	1020

Equipment Details	Make/Model	Serial No.
<b>Sound Level Meter:</b>	Rion NL-52	733098
<b>Calibrator:</b>	Rion NC-74	35105087
<b>Source of Equipment:</b>	ANV	
<b>Meter Timestamp (Start/End, GMT/BST):</b>	Start GMT	

<b>Description of Location:</b>	Rear garden of property
<b>Distance from façade::</b>	>3.5m
<b>Noise sources observed:</b>	Distant road noise, birdsong
<b>Additional notes:</b>	Snow on ground, but sky clearing

#### Installation (Visit 1)

<b>Date:</b>	24/02/2022	<b>Time:</b>	1020
<b>Filename:</b>	401	<b>Calibration level:</b>	94.0
<b>Range setting:</b>	20-130	<b>Meas. period:</b>	10min
<b>Freq weighting:</b>	A	<b>Rain Gauge?</b>	No
<b>Notes:</b>	Snow on ground, but sky clearing		

#### Visit 2

<b>Date:</b>	17/03/2022	<b>Time:</b>	1320
<b>Visited by:</b>	PB	<b>Calibration level:</b>	94.0
<b>Level pre-calibration</b>	93.9	<b>Batts replaced?</b>	No
<b>Equipment Removed?</b>	Yes		
<b>Notes:</b>	Light rain, overcast, moderate winds. Local traffic, motorway, birds audible.		





### Noise Survey Record Sheet

<b>Project No.</b>	3959	<b>Project Name:</b>	HoS/Torrance Ext
<b>Location (x of y)</b>	5	<b>Installed By:</b>	MT
<b>Lat/Long</b>	55.862827, -3.751836	<b>Location Name</b>	24 Miller street
<b>Start Date</b>	24/02/2022	<b>Start Time</b>	1100

Equipment Details	Make/Model	Serial No.
<b>Sound Level Meter:</b>	Rion NL-52	610193
<b>Calibrator:</b>	Rion NC-74	35105087
<b>Source of Equipment:</b>	ANV	
<b>Meter Timestamp (Start/End, GMT/BST):</b>	Start GMT	

<b>Description of Location:</b>	Garden to rear of property
<b>Distance from façade::</b>	3.5m
<b>Noise sources observed:</b>	Road noise from m8 motorway dominant
<b>Additional notes:</b>	Snow on ground, light flurries but mostly clear. Moderate breeze.

#### Installation (Visit 1)

<b>Date:</b>	24/02/2022	<b>Time:</b>	1100
<b>Filename:</b>	501	<b>Calibration level:</b>	94.0
<b>Range setting:</b>	20-130	<b>Meas. period:</b>	10min
<b>Freq weighting:</b>	A	<b>Rain Gauge?</b>	No
<b>Notes:</b>	Snow on ground, light flurries but mostly clear. Moderate breeze.		

#### Visit 2

<b>Date:</b>	17/03/2022	<b>Time:</b>	1200
<b>Visited by:</b>	PB	<b>Calibration level:</b>	94.0
<b>Level pre-calibration</b>	94.1	<b>Batts replaced?</b>	No
<b>Equipment Removed?</b>	Yes		
<b>Notes:</b>	Dry, overcast, moderate winds. Motorway, foliage and birds audible.		





### Noise Survey Record Sheet

<b>Project No.</b>	3959	<b>Project Name:</b>	HoS/Torrance Ext
<b>Location (x of y)</b>	6	<b>Installed By:</b>	MT
<b>Lat/Long</b>	55.8578184, -3.7504574	<b>Location Name</b>	6 Argyll court
<b>Start Date</b>	24/02/2022	<b>Start Time</b>	1140

Equipment Details	Make/Model	Serial No.
<b>Sound Level Meter:</b>	Rion NL-52	921176
<b>Calibrator:</b>	Rion NC-74	35105087
<b>Source of Equipment:</b>	ANV	
<b>Meter Timestamp (Start/End, GMT/BST):</b>	Start GMT	

<b>Description of Location:</b>	Garden to rear of property
<b>Distance from façade::</b>	>3.5m
<b>Noise sources observed:</b>	Wind in trees, road traffic inc slight distant noise from motorway. Chainsaw in use on next street on arrival, stopped shortly after
<b>Additional notes:</b>	Dry, medium cloud cover, moderate winds. Lawn mower, wind in trees, traffic noise audible.

#### Installation (Visit 1)

<b>Date:</b>	24/02/2022	<b>Time:</b>	1140
<b>Filename:</b>	0	<b>Calibration level:</b>	94.0
<b>Range setting:</b>	20-130	<b>Meas. period:</b>	10min
<b>Freq weighting:</b>	A	<b>Rain Gauge?</b>	Yes
<b>Notes:</b>	Dry, medium cloud cover, moderate winds. Lawn mower, wind in trees, traffic noise audible.		

#### Visit 2

<b>Date:</b>	17/03/2022	<b>Time:</b>	1240
<b>Visited by:</b>	PB	<b>Calibration level:</b>	94.0
<b>Level pre-calibration</b>	93.9	<b>Batts replaced?</b>	No
<b>Equipment Removed?</b>	Yes		
<b>Notes:</b>	Dry, medium cloud cover, moderate winds. Lawn mower, traffic noise audible.		



AQ510 SODAR DEPLOYMENT REPORT

**AQ510 at Hill Farm Feb '22**

ZXMS-ARC001-REP01

Version 01

02/03/2022





<b>Document Reference</b>	ZXMS-ARC001-REP01	Version 01
<b>Author</b>	Daniel Hegarty	
<b>Checked</b>	David Noble	02/03/2022
<b>Approved</b>	David Noble	02/03/2022

Issue	Date	Revision Details
01	02/03/2022	First Issue

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# 1 Introduction

This deployment report details the installation and commissioning of AQ510 at Hill Farm Feb '22.

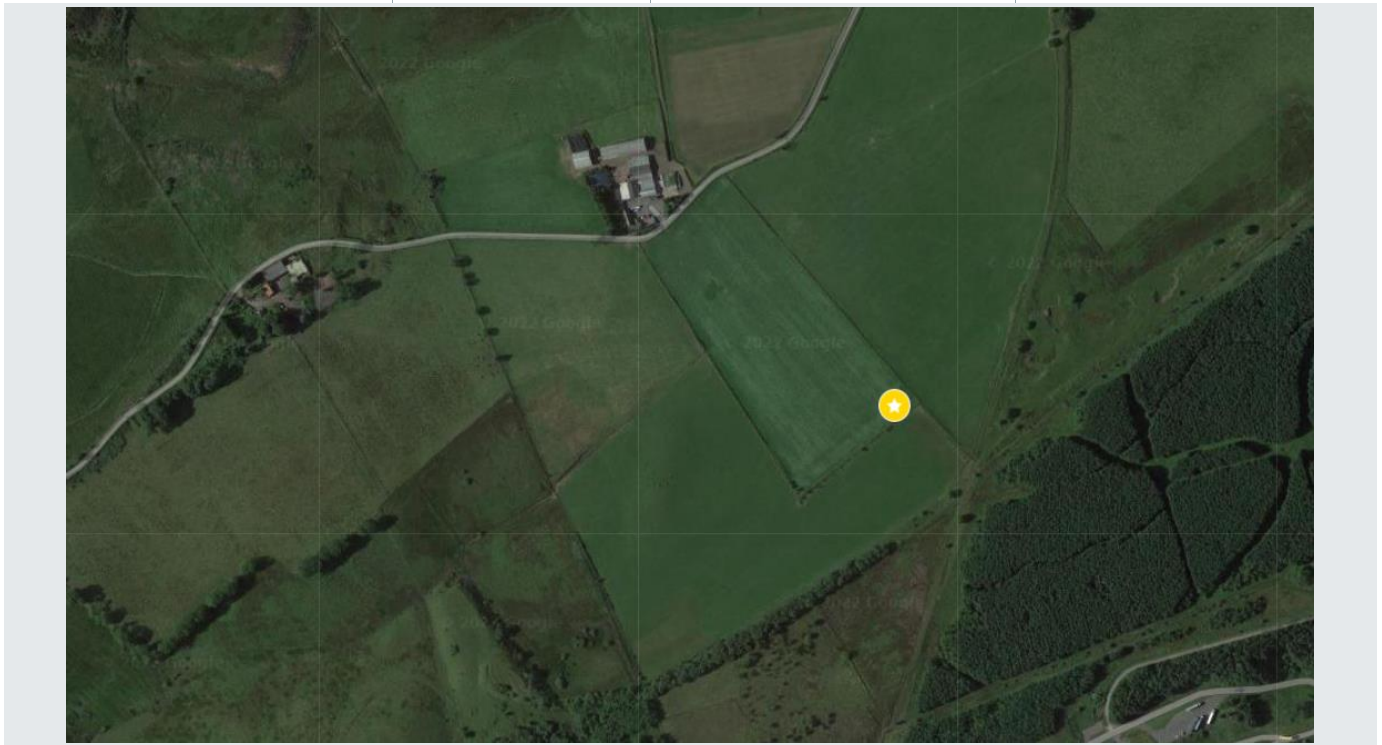
The deployment was prepared and carried out based on UK Health and Safety Regulations, in-house policies and procedures, and industry best practice by ZXMS specialist engineers.

## 2 Project Information

Information	
<b>Client</b>	Arcus Consultancy Services Ltd.
<b>Project Reference</b>	ARC-001
<b>Client Main Contacts</b>	Stuart Davidson; Ross MacKenzie
<b>Lead Engineer/Technician</b>	Daniel Hegarty
<b>Support Personnel</b>	David Noble
<b>Measurement Campaign Description</b>	Noise campaign: 4 weeks.
<b>Commissioning Time</b>	25/02/2022 13:30 UTC

## 3 Deployment Location

Locations	Datum	Coordinates	Elevation
<b>Site Location Description</b>	Hill Farm, Eastfield, North Lanarkshire, Scotland, ML7 5TS		
<b>Sodar Location</b>	WGS84	55.867300, -3.763930	200m MSL
	BNG	NS 89712 65199	200m MSL



*Live deployment location of Sodar AQ510*



## 4 Equipment Details

### 4.1 Access

Details/Description	
Access Vehicle	Landowner tractor
Winter Condition Access	4x4 required to reach farm – landowner vehicle required to reach deployment location.
Gates/Padlock	n/a
Other requirements	

### 4.2 Power Supply Details

Details/Description	
AQ510 Converter Type	AC/DC <input type="checkbox"/> DC/DC <input checked="" type="checkbox"/>
Power Source / PSU Description	ZXMS PSU
Battery Bank	232Ah@24V AGM
Solar Array(s)	2x360Wp(24V)
Other Renewable Resource	n/a
Fuel Cell(s)	EFOY PRO2400 with 2xM28
Estimated Autonomy	Winter: 12 Weeks
PSU Remote Monitoring	Remote Connection Confirmed <input checked="" type="checkbox"/>
Comments	

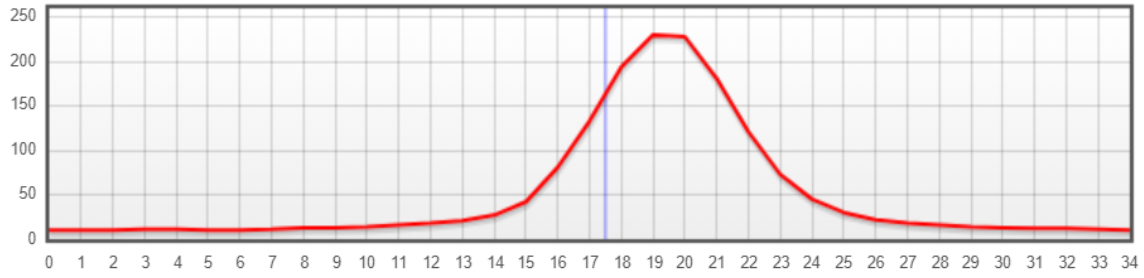
## 5 Sodar Configuration

### 5.1 Initial Checks & Hardware Setup

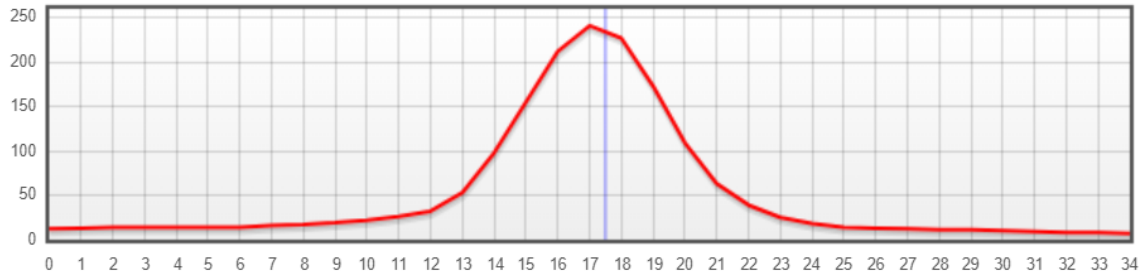
Checks/Details				
Unit Checked for Damage	<input checked="" type="checkbox"/>			
Airflow Clearance Beneath Unit	<input checked="" type="checkbox"/>			
Sodar Orientation	148°	<input type="checkbox"/> Magnetic North	<input type="checkbox"/> Grid North	<input checked="" type="checkbox"/> Offset Used
Sodar Level, Stable and Secure	<input checked="" type="checkbox"/> Unit level	<input checked="" type="checkbox"/> Unit Stable	<input checked="" type="checkbox"/> Unit Secured	
General Comments				
Spectrum Timestamp				



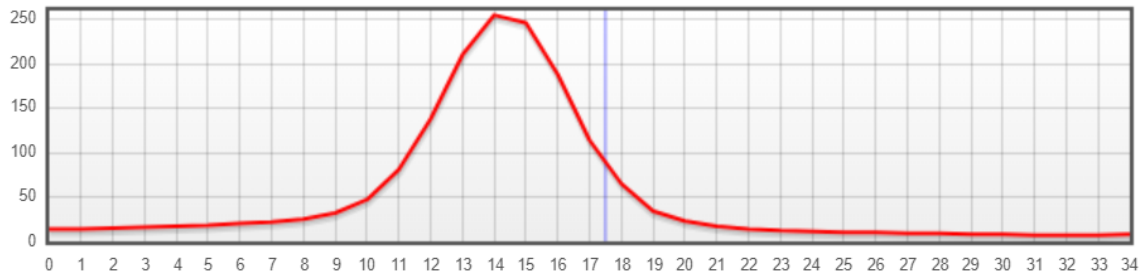
Signal A.



Signal B.



Signal C.





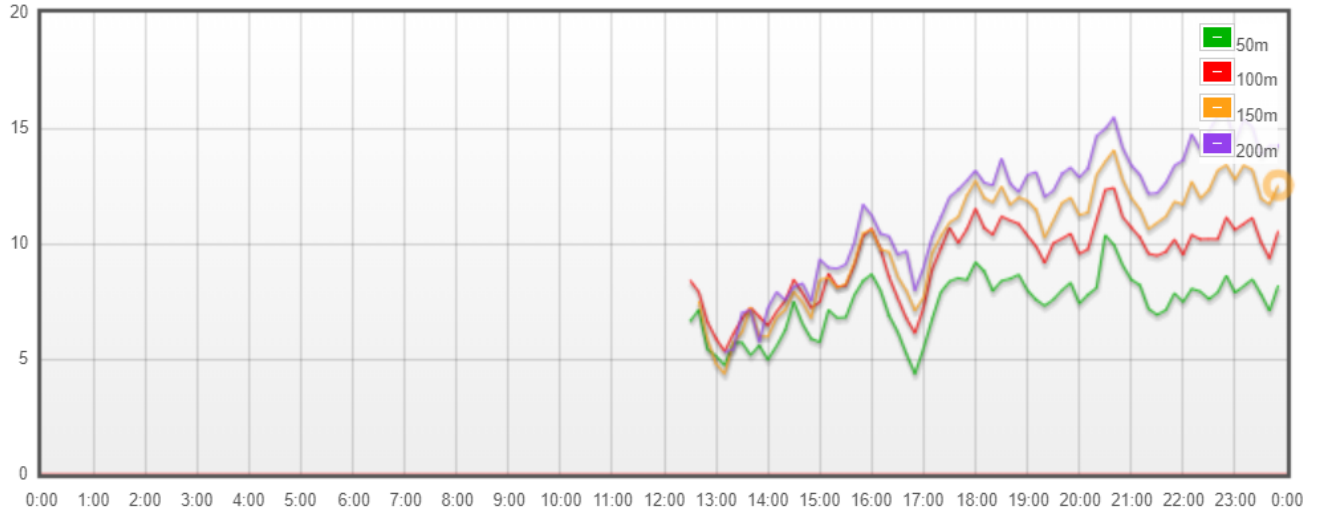


Time Series

### Resulting Time Serie

Station: ZXMS1  
Type: Wind Speed (m/s)  
Period: 2022-01-27 to 2022-02-25

Currently viewing day: 2022-02-25 - Friday



Time(UTC)=23:50, Value= 12.52



## Wind Graph

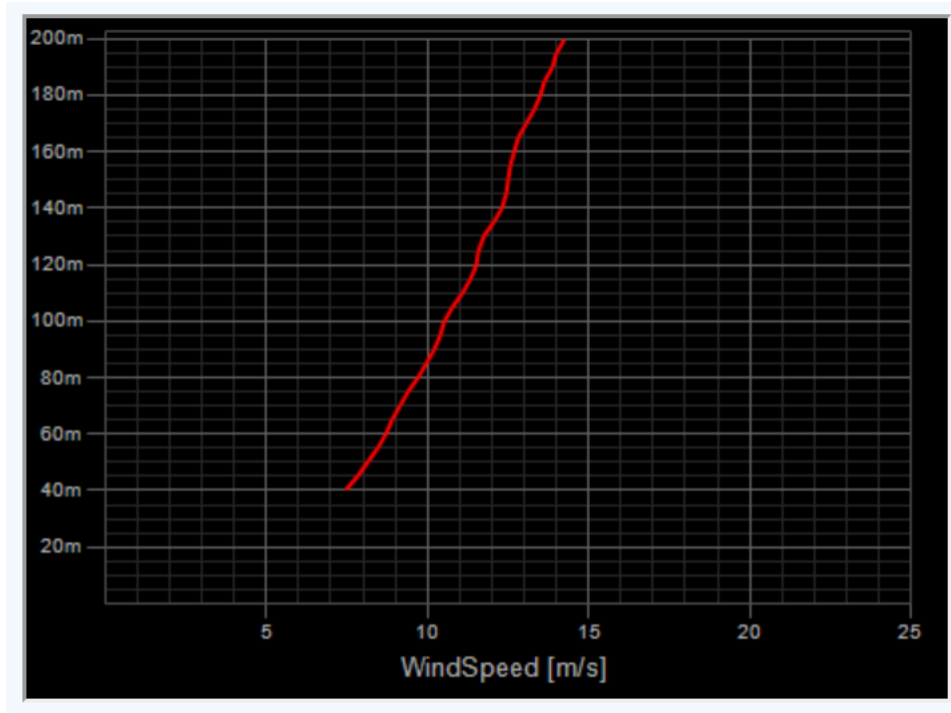
Station: ZXMS1 ▾

Date: 2022-02-25



Update available timestamps

Choose timestamp: 2022-02-25 23:50 ▾



## 5.2 Final Checks

## Sodar Checklist

Sodar Level	✓	Feet Secured	✓
Photograph Installation	✓	Wheel Clamps Secured	✓
Photograph Surroundings	✓	Trailer Door Secured	✓
Housekeeping	✓	Cables Tidy and Secured	✓
Final Visual Survey	✓	Locks Secured	✓

## General Comments

## PSU/Fuel Cell Checklist

Methanol Cartridges (Visual Inspection)	✓	Clear Air Flow (Internal)	✓
PSU Enclosures Level and Stable	✓	Clear Air Flow (External)	✓
Enclosures Secured	✓	Water Exhaust Free of Obstructions	✓

## General Comments

## 6 Photographs

### 6.1 Installation

Views of the installed Equipment







## 6.2 360° Surroundings

### Panorama Views

North



North-East





East



South-East



South



South-West



West

North-West







## 7 Conclusion

### 7.1 Health, Safety and Environmental Observations/Issues

Comments
None

### 7.2 Notes

Comments
None

### 7.3 Reference Documents/Files

File	Description
n/a	n/a