



**Project: Ballincor - LIDAR Installation Report**

**Client: RWE Renewables Ireland Ltd**



**Galetech Energy Developments, Clondargan, Stradone, Co. Cavan, Ireland**

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## Document Control

Responsible for	Function	Name	Date	Signature
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Approved	Project Manager	Kieran Elliott	31/01/2022	K.E
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## Record of Changes

Revision Number	Date	Page Number	Description	Approved	Authorised
0					
1					
2					
3					

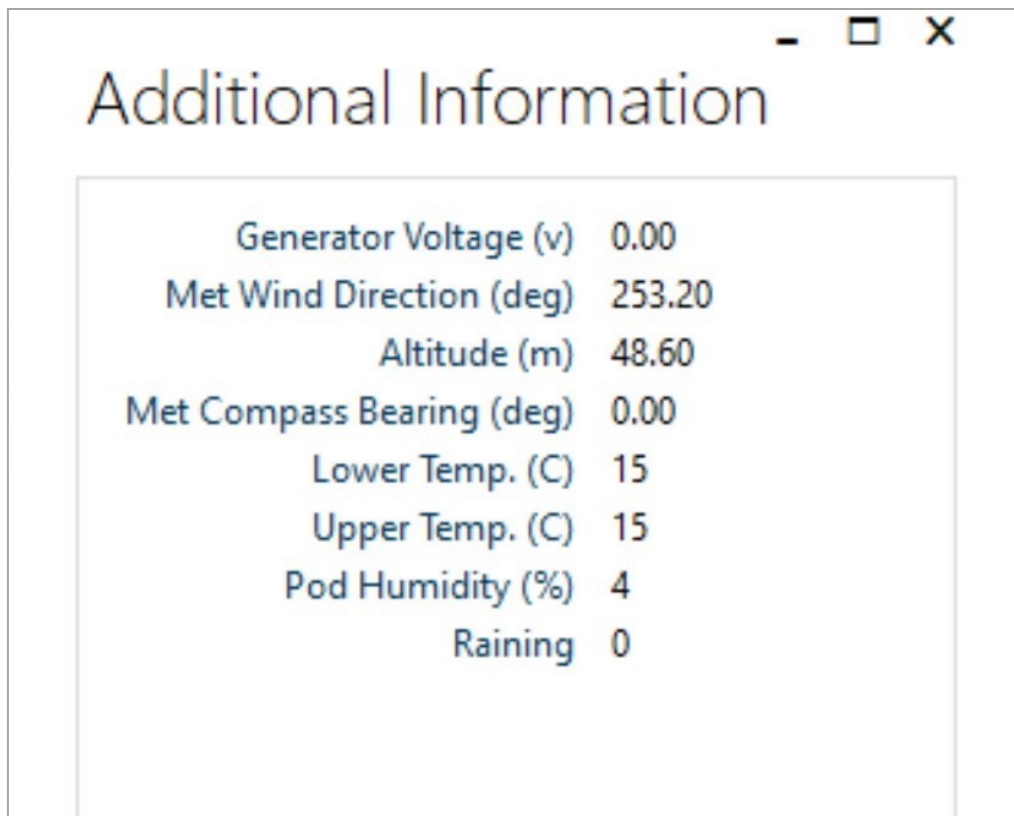
## Distribution List

#	Function Title	Company	Name (optional)
1	Project File	GED	
2	Client	RWE Renewables Ireland Ltd	
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<b>LIDAR Unit Details</b>	
Customer	RWE Renewables Ireland Ltd
Deployed by	Fergal McConnell, Paddy Tuite & Enda Collins – Galetech Energy Developments Ltd
LIDAR installation date	25/01/2022
LIDAR ID number	ZX1237
<b>Unit Orientation Checks</b>	
Bearing (Compass)	Aligned to magnetic north using the LIDAR met station compass
Met station marker and correctly aligned	✓
Unit Level (Spirit Level)	✓
<b>External System Checks</b>	
Mains or off grid power	Off grid
Power Solution	Solar/Methanol Hybrid
Battery bank size	4 x 130AH 12V
Battery bank voltage	24V
Generator hours	N/A
Fuel Supply/ Fuel Level	4 x M28 Fuel Cartridge
PV Cleaned	✓
Generator voltage >11.2V	N/A
<b>External Unit Checks</b>	
Observation	None
No damage or trapped cables	✓
Clear Optics	✓
System check lights, Modem light flashing green after 2 minutes	✓
Screen wash/Protection	Yes /-20°C protection
Amount of fluid in washer bottle	Full
ZephIR configured to wipe when rain sensor is triggered	✓
Force wash wipe tested	✓

<b>LIDAR Check</b>	
Version of Waltz used to test	Version 4.7
Status lights green	✓
Check lens height	1.0 m
<b>Met Station Checks</b>	
Tilt Value (degrees)	0 Degree
Met station wind direction changing	✓
Met station wind speed changing	✓
Met Pressure (Pa)	1027.60
Ambient temperature (C)	9.30 Degrees
GPS Coordinates	53.03658, -7.94564
Elevation at ground level at the lidar position	48.6m
<b>Communication Checks</b>	
Iridium check	N/A
Cellubi IP address	10.130.134.19
Modem/aerial (Connection Test)	✓
Internet available flag	✓
Email on power on	Sent
<b>System Checks</b>	
ZephIR Firmware version	3.0012 ZX300
ZephIR Serial Number	ZX1237
Clear wind data using Waltz	N/A
Input Voltage (v)	12.29
Super Capacitor Voltage (v)	N/A
Check Pod Humidity	4%
Pod temperatures	Upper. 15 degrees
	Lower. 15 degrees

Final Checks						
Actual Measurement Heights (Including Height of LIDAR Window)		200	180	150	110	105
		100	90	80	60	30
Time	ZephIR Time 25/01/2022 14:51:22 GMT+0					
	Local Time 25/01/2022 14:51:22 GMT+0					
Log off WIFI connection before leaving	✓					



**Fig. 1 – Additional information regarding the LIDAR unit.**

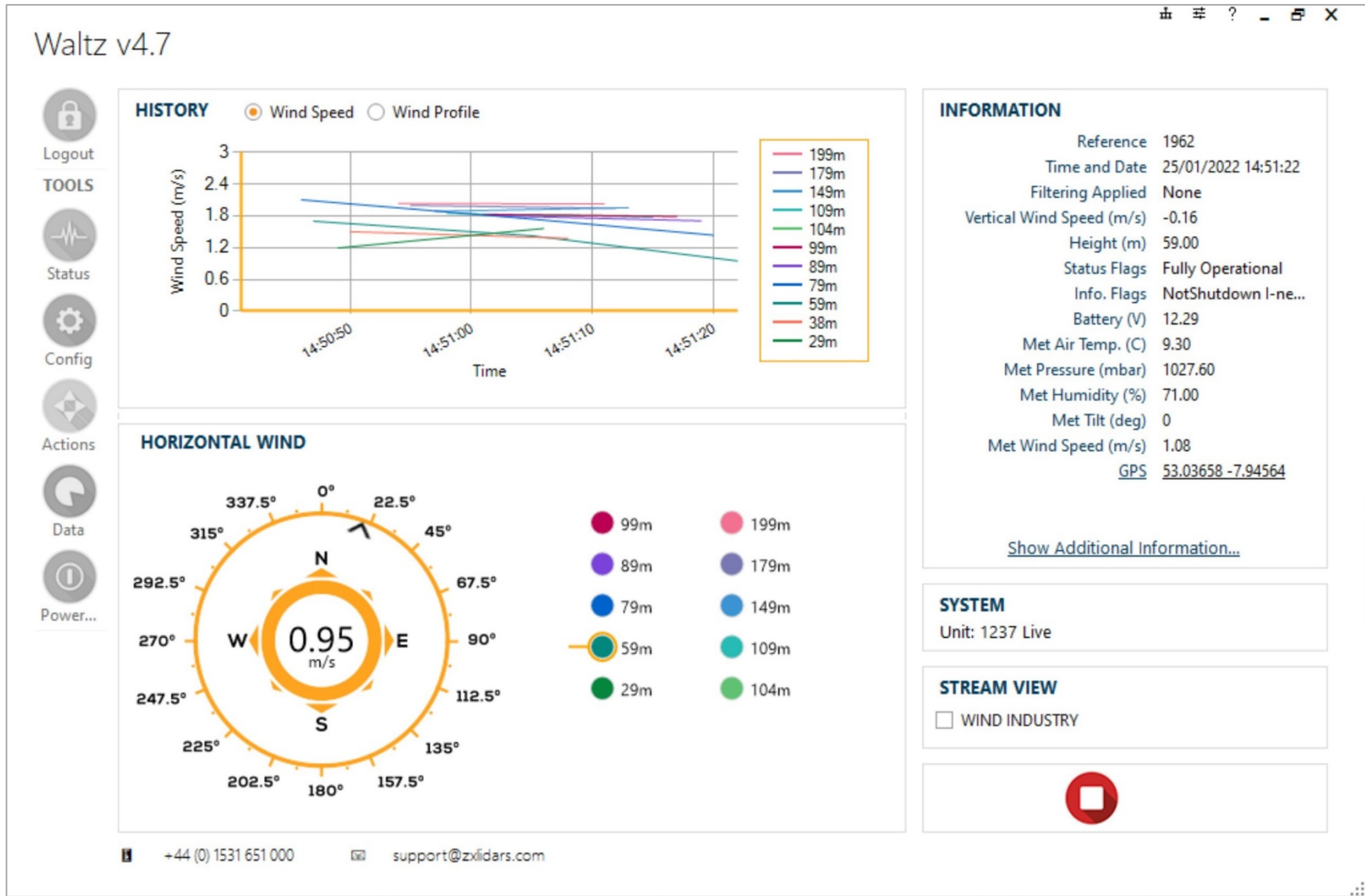


Fig. 2 - Image of initial measurements of the LIDAR unit.

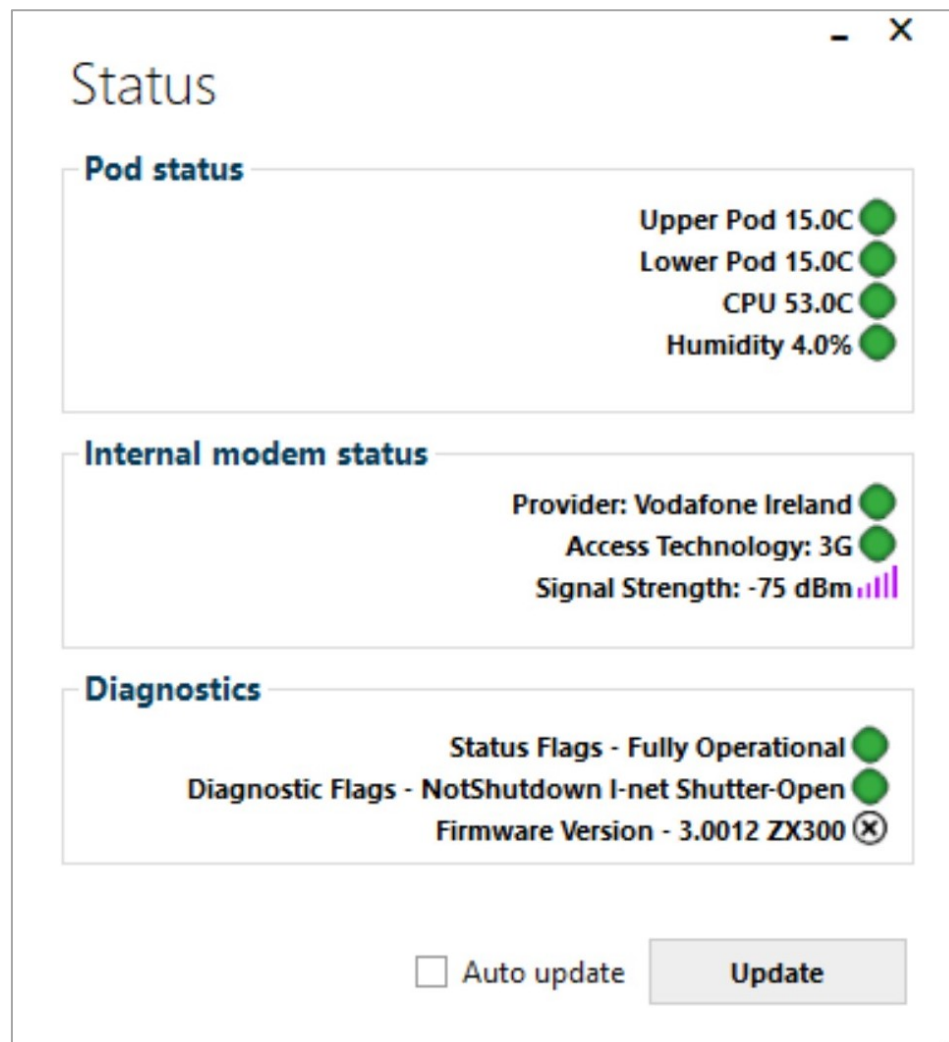
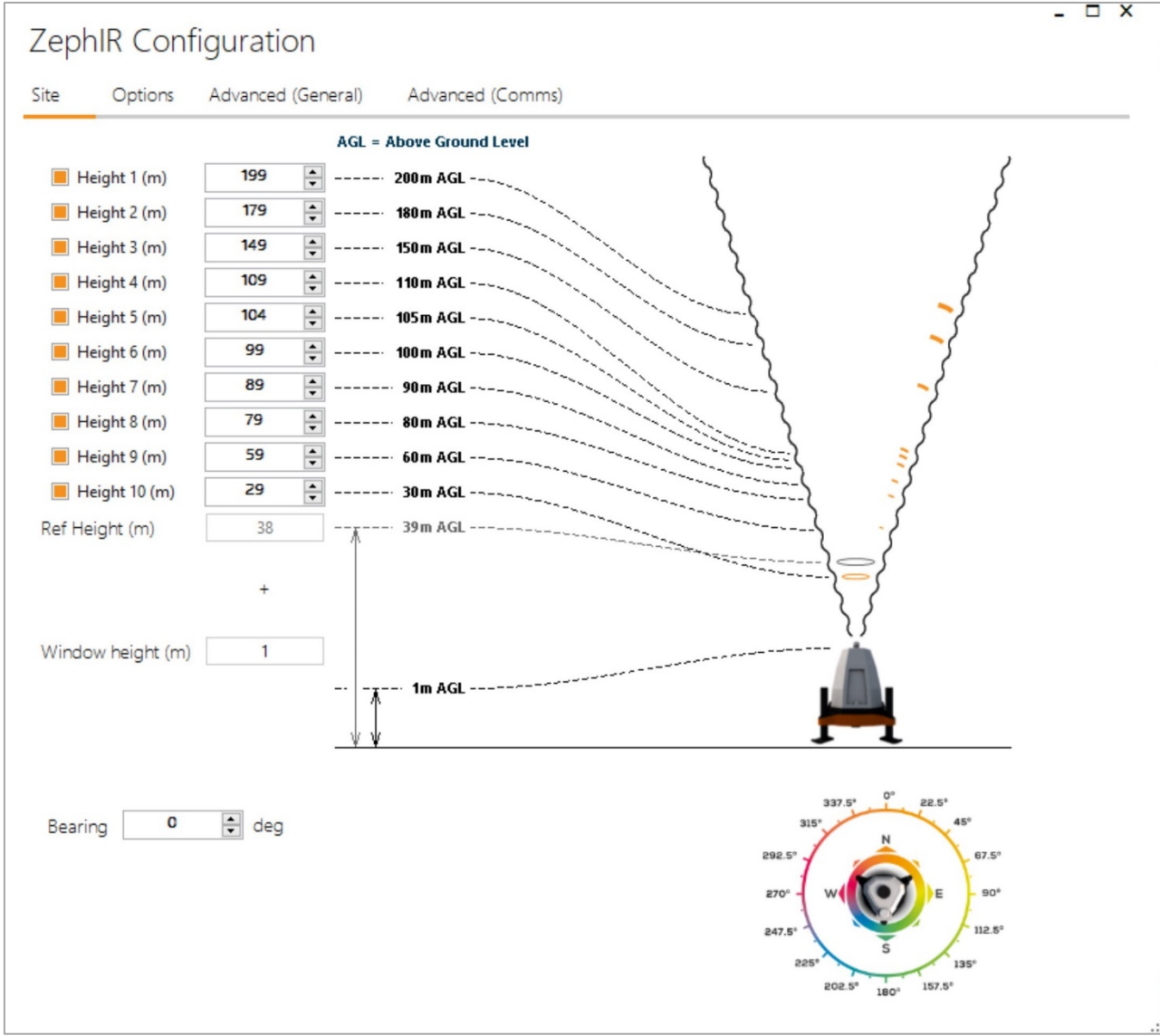
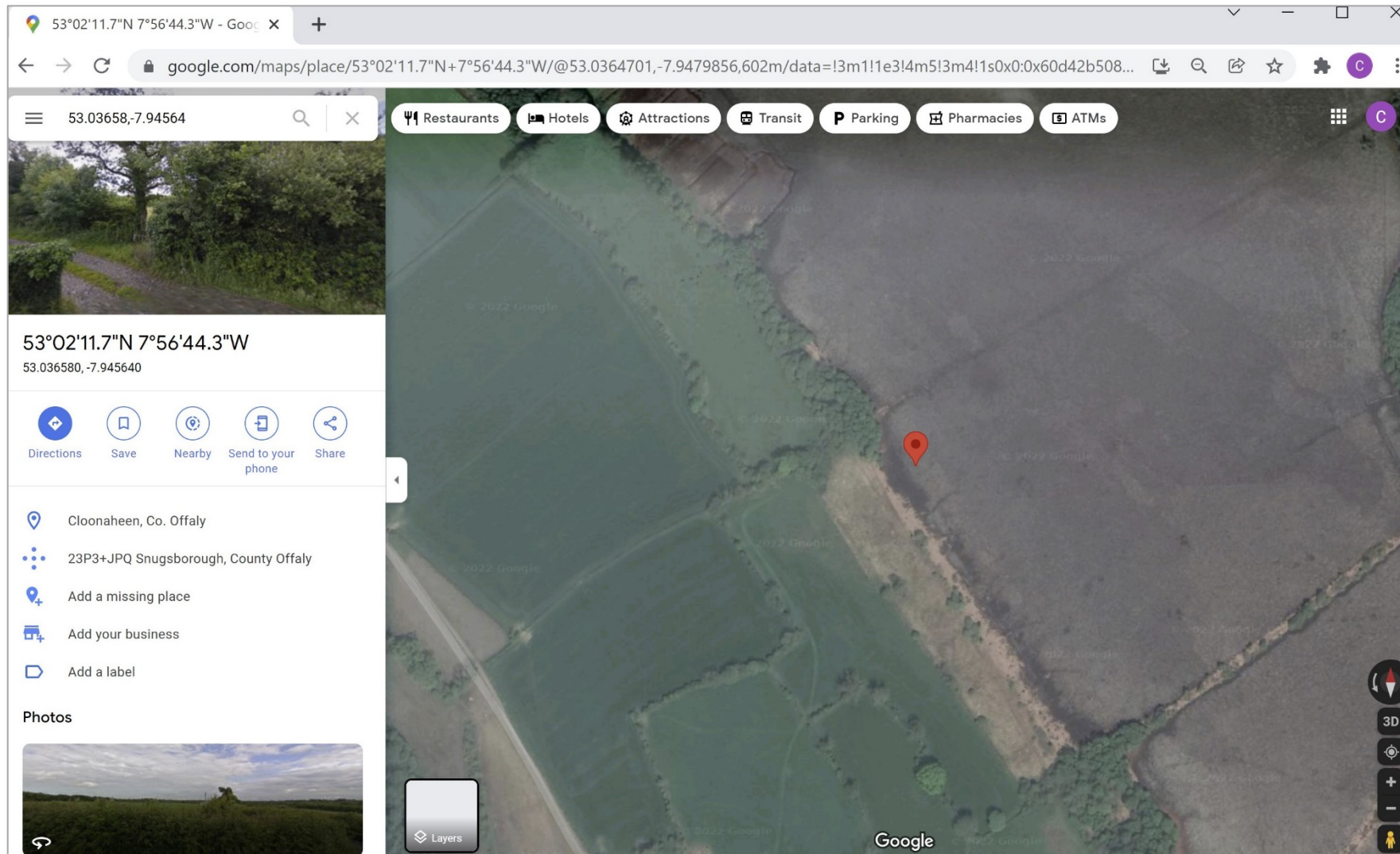


Fig. 3 - LIDAR system status after initial setup.



**Fig. 4 - Image of LIDAR equipment measurement height setup.**



**Fig. 5 - Equipment location based on LIDAR GPS.**



**Fig. 6 – Image of LIDAR setup.**



**Fig. 7 - Image of LIDAR setup.**



**Fig. 8 - Image of LIDAR bubble level 1.**



**Fig. 9 - Image of LIDAR bubble level 2.**



**Fig. 10 - Image of LIDAR power supply setup.**



**Fig. 11 - Photographs of the area surrounding the LIDAR Position.**