**Waterloggers Moor House 16 and 17th of July 2022**

**Notes and issues**

All waterloggers were purchased from In-Situ with wire and clips. Dipwell tubes were purchased from Tool Station. Nails, cable ties and wire cutters were purchased from ScrewFix. Wire mesh B and Q. Tights Asda.

Needed!!! A 7 torque wrench for clips! Next time cut tight legs before going.

The ruler brought was only 90 cm which threw the installation of the dipwells so many apart from the damaged site are installed with 10 cm sticking out instead of 5 cm. It was also a challenge to use the Gouge sampler to get the peat out of the holes, alternative screw would be better. Peat could have been sampled as otherwise it is bit of waste.

Cutting of the wire and fixing to the clamps could be done before hand as it takes time. The programming of the waterloggers is very fast.

Wire length: fully ready deployable unit was 88 cm in length includes from top loop to bottom of the sensor. This means there is 15 cm from the bottom of the tube regardless of site. The sensor bottom is 80 cm from the surface soil for site with 10 cm above however for site (dam) the bottom is 85 cm from the surface.

**Record**

The waterloggers were placed according the instructions from the RSPB Forsinard.

Firstly, at each site the peat depth was measured and recorded. At all sites the depth was above 1m therefore the 105 cm dipwell tubes were used.

The sites were visited in the following order: restored, near natural, damaged.

The installation was done over 2 days..The first day was installation of the dipwells followed by the installation of the waterloggers. The waterloggers were set to record at 20.00 17th July 2022 every hour linear. The remind later was used and this was recorded on site and inputted to the waterlogger before deployment. To do this you need the docking station and computer with software.

Both days were rather breezy on the top of the hills but warm 18degrees. Note 18th July and 19th of July are forecasted as the hottest days on record. At time of writing the temperature on site was 25 degrees.

**Restored site (tube 10 cm sticking out!!)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  17 /07/ 2022/cm | Peat depth/cm | Way  point | Altitude/m |
| Res1\_CS\_SN920758 | Core sampling | 10 | 44.9 | 212 | 388 | 561 |
| Res2\_top\_SN908391 | Top of hill | 10.1 | 48.5 | 242 | 389 | 565 |

**Res 1\_CS Waypoint 388 (N54 41’ 31.4’’, W002 22’ 56.2’’)**

This is the location of the core sampling conducted by Ezra and co. The site is on a slope below a blocked drain. The drain is evidently wet with sphagnum moss and the dam is a peat dam. The waterlogger was placed between two dams, middle sampling point.

**Res 2\_top Waypoint 389 (N54 41’ 30.1’’ W002 23’ 02.5’’)**

This is located on the car side of another blocked drain (not the side facing the mountains). The waterlogger was placed in the middle of 2 dams. Note that here there is a dip in the surface. Therefore the 10.1 cm is measured on the side of the dipwell facing the mountains. Note 2: this was only waterlogger that when programming the first depth point the computer froze so hopefully it did take the measure.

**Near natural site (10 cm sticking out)!!!**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  17 /07/ 2022 | Peat depth/cm | Way  point | Altitude/m |
| NN\_1\_CS\_SN923888 | Core sampling | 25.5 | 10 | 190 | 390 | 556 |
| NN\_2\_top\_SN925290 | Top of hill | 72 | 10 | 124 | 391 | 554 |
| Baro\_1\_SN918186 | Baro top |  | 21.5 |  | 392 | 555 |

NN\_1\_CS Waypoint 390 (N54 41’ 38.6’’ W002 22’ 32.2’’). Middle of core sampling points. The ground was dry but there is a clear dominance of sphagnum moss, deer moss and grasses and heather. Depth above the surface was measured towards the road.

NN\_2\_top Waypoint 391 (N54 41’ 38.1’’ W002 22’ 30.1’’)

This site is what looked like the top of the hill, towards a fence. It is odd but the peat here is less and it was very dry. Lowest water table. Depth above the surface was measured towards the road.

Baro\_1 Waypoint 392 (N54 41’ 38.1 W002 22’ 30.0’’)

Barologger was placed in a dipwell tube directly on the nail.

**Damaged site (5 cm sticking out)!!!**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  17 /07/ 2022 | Peat depth/cm | Way  point | Altitude/m |
| DAM\_1\_CS\_SN923958 | Core sampling | 82.5 | 5 | 144 | 393 | 550 |
| DAM\_2\_top\_SN924922 | Top of hill | 49.2 | 5 | 186 | 394 | 550 |

DAM\_1\_CS (Waypoint 393 N54 41’ 55.5’’, W002 22’ 56.8’’)

Location as close to the sampling points as possible. GPS was bit odd. The sampling points are near a track. The site is close to a mining area. Peat had black top.

DAM\_2\_top (Waypoint 394 N54 41’ 53.3’’, W002 22’ 56.6’’)

This was up to the top of the hill closer to the car park.