**Waterloggers Langwell 2nd and 3rd of August 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.

To solve the issue with the nails, long 80 cm screws were purchased with two nuts each. You can get these from B and Q. The other issue is clamps. There was not enough of these in the in-situ kit. Therefore they had to be purchased again from amazon, M3 version and there were delivered to Brora.

Cutting of the wire and fixing to the clamps was done the night before. The programming of the waterloggers is very fast.

Wire length: fully ready deployable unit was cm in length includes from top loop to bottom of the sensor. This means there is cm from the bottom of the tube regardless of site.

**Record**

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

Firstly, at each site the peat depth was measured and recorded. Issue was that for Strathy and also Morven there was a few issues with depths under 1m.

The sites were visited in the following order: Morven (drained), Wag (Res), Strathy (Res), Scaraben (Res) and Braemore (NN).

The installation was done over 2 days but this was not really enough. Each day we left Forsinard at 7 am and were back at almost 10 and 8pm over the other days. The first day was installation of the dipwells followed by the installation of the waterloggers. The waterloggers were set to record at 22.00 3rd August 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. Note this was a challenge too, as you need to ensure dry weather. The weather was mixed and warm. Staring at 7 am in 13 degrees and finishing close to 20 degrees. Unpredictable rain showers. To prevent the laptop getting wet we brought a shelter but luckily did not need to deploy it.

**Morven damaged site (5 cm sticking out)!!!**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  3/08/ 2022/cm | Peat depth/cm | Way  point | Altitude/m |
| Morven\_Dam\_1\_ tea (SN923600)  90 cm tube used | tea sampling (left going up hill) | 5 cm | Empty! (90 ) | 1m 5cm | 395 | 279 |
| Morven\_Dam\_2 (SN921921) | tea sampling (right going up hill) | 5 cm | 90 | 1m 15cm | 396 | 265 |

**Morven\_Dam\_1\_ tea Waypoint 395 (N58 12’ 42.5’’, W003 42’ 56.3’’)**

Beside on of middle tea sampling sites on the hill side of the drain (on the left going uphill). Tea hole G.

**Morven\_Dam\_2 Waypoint 396 (N58 12’ 44.8’’, W003 43’ 00.1’’)**

Beside other tea sampling site on other side of the drain (right as you are going up hill). Middle tea sample.

**Wag Restored site (tube 5 cm sticking out)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  3/08/ 2022/cm | Peat depth/cm | Way  point | Altitude/m |
| Wag\_Res\_1\_Tea (SN919950) | Tea | 5 | 41.5 | 224 | 397 | 268 |
| Wag\_Res\_2 (SN922208) | Towards the road | 5 | 42.0 | 205 | 398 | 268 |

**Wag\_Res\_1\_Tea Waypoint 397 (N58 12’ 24.4’’ W003 41’ 10.5’’)**

This is the location of the tea bag burial. The location of the drain is very odd here as it almost looks like there is two drains that have been blocked. I checked the next drains and it is the same look. Must be a restoration method. However the drains were full of water so whatever it is they are working. There is more clear drain blocks lower down the hill. Samples of peat were taken and vegetation.

**Wag\_Res\_2 Waypoint 398 (N58 12’ 25.6’’ W003 41’ 10.8’’)**

This is a second drain that is blocked and looked a bit better. The location is more towards the main road where the car.

**Strathy Restored site (tube 5 cm sticking out)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  3/08/ 2022/cm | Peat depth/cm | Way  point | Altitude/m |
| Strathy\_Res\_1 (SN923906) | Tea | 5 | 29 | 123 | 399 | 143 |
| Strathy\_Res\_2 (SN924937) | Another drain | 5 | 83 | 111 | 400 | 140 |
| Strathy\_Baro\_1 (SN924507) |  | 41 | 68 | ? | 401 | 140 |

**Strathy\_Res\_1 Waypoint 399 (N58 11’ 33.0’’ W003 34’ 43.9’’)**

Near the tea sampling site but parallel to middle sampling due to issues with middle.

**Strathy\_Res\_2 Waypoint 400 (N58 11’ 32.1’’ W003 34’ 45.1’’)**

This is a site further down

**Strathy\_Baro\_1 Waypoint 401 N58 11’ 33.2’’ W003 34’ 45.2’’**

**Scaraben Restored site (tube 5 cm sticking out)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  3/08/ 2022/cm | Peat depth/cm | Way  point | Altitude/m |
| Scaraben\_Res\_1 (SN912467) | Tea | 5 | 37.9 | 3m 78 cm | 403 | 233 |
| Scaraben\_Res2 (SN924661) | Perpendicular drain | 4ish on hill, 5 cm on other side | 32.1 | 3m 82 cm | 402 | 235 |

**Scaraben\_Res\_1 Waypoint 403 (N58 12’ 06.0’’ W003 33’ 31.6’’)**

**Near tea SAMPLING**

**Scaraben\_Res\_2 Waypoint 402 (N58 12’ 06.8’’ W003 33’ 32.6’’)**

**Perpendicular drain towards main hills**

**Near natural site (5 cm)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of waterlogger | Notes | Depth of dipwell tube above surface/cm | Lip of tube to water  3 /08/ 2022 | Peat depth/cm | Way  point | Altitude/m |
| Braemore\_NN\_1 (SN920771) | Core sampling | 5 | 35 | 3m 82 cm | 405 | 296 |
| Braemore\_NN\_2 (SN922295) | Top of hill | 3.5 | 19.6 | 4m 10 cm | 404 | 296 |
| Braemore\_Baro\_2 (SN920089) | Baro top | 41 | 51.5 |  | 406 | 294 |

**Braemore\_NN\_1 Waypoint 405 (N58 15’ 40.6’’ W003 40’ 26.3’’)**

Site between the tea bag sampling points

**Braemore\_NN\_2 Waypoint 404 (N58 15’ 40.5’’ W003 40’ 27.8’’)**

Towards pool systems.

**Braemore\_Baro\_2 Waypoint 406 (N58 15’ 40.5’’ W003 40’ 26.3’’)**

Near the tea bag sampling points