

## Update on measurement equipment and data collection-26/11/2014



# Weather Data

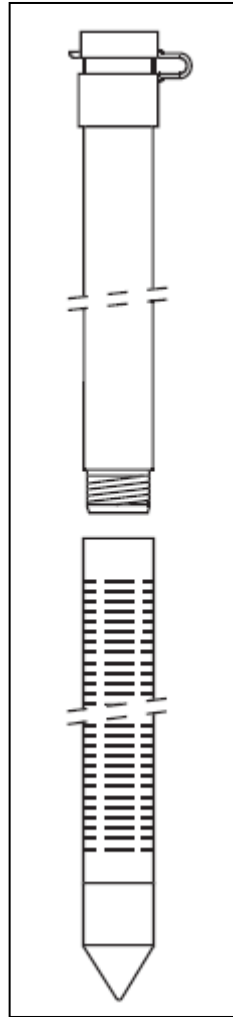
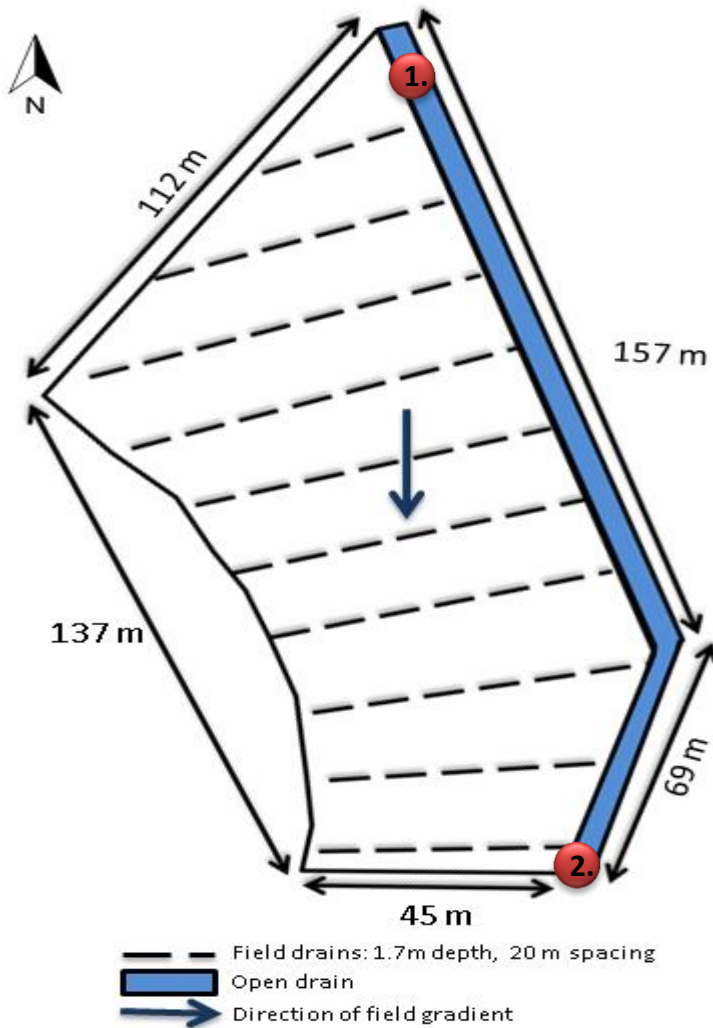
<http://www.teagasc.ie/heavysoils/weather/>



| DannysBerm Table 1 - Microsoft Excel |                  |           |        |          |           |           |          |          |          |         |           |          |          |          |          |          |          |            |          |   |
|--------------------------------------|------------------|-----------|--------|----------|-----------|-----------|----------|----------|----------|---------|-----------|----------|----------|----------|----------|----------|----------|------------|----------|---|
| TOAS                                 |                  |           |        |          |           |           |          |          |          |         |           |          |          |          |          |          |          |            |          |   |
| 1                                    | A                | CR200Seri | CR200X | No_SN    | CR200X.St | Heavy Sol | F        | S        | G        | H       | I         | J        | K        | L        | M        | N        | O        | P          | Q        | R |
| 2                                    | TIMESTAMP        | RECORD    | RH     | TdC_Avg  | WS_ms     | WindDir   | WindDir  | WS_ms    | VRain_mm | WindRun | AirTC_Avg | RH_Avg   | WS_ms_A  | Solar_W  | ETo      |          |          | T109_C_Avg |          |   |
| 3                                    | TS               | RN        | %      | Deg C    | meters    | /se       | meters   | /se      | meters   | /se     | m         | Deg C    | %        | Avg      | Avg      | ETo      |          | Deg C      |          |   |
| 4                                    |                  |           | Smp    | Avg      | WVc       | WVc       | WVc      | WVc      | Max      | Tot     |           |          |          |          |          |          |          | Avg        |          |   |
| 5                                    | 24/07/2014 12:00 | 0         | 89.102 | 18.14979 | 2.007018  | 43.00634  | 22.30356 |          | 3.5      | 0       | 1144      | 20.0677  | 88.64029 | 2.007018 | 387.3976 | 0.03778  |          | 17.36451   |          |   |
| 6                                    | 24/07/2014 12:15 | 1         | 90.32  | 18.03962 | 1.990833  | 32.68853  | 16.07108 |          | 3.2      | 0       | 1791.75   | 19.90297 | 88.93313 | 1.990833 | 303.5063 | 0.049153 |          | 17.39474   |          |   |
| 7                                    | 24/07/2014 12:30 | 2         | 90.422 | 18.14746 | 1.978333  | 19.81775  | 20.1024  |          | 3.425    | 0       | 1780.5    | 19.81119 | 90.04707 | 1.978333 | 267.2511 | 0.043752 |          | 17.43016   |          |   |
| 8                                    | 24/07/2014 12:45 | 3         | 87.386 | 18.38221 | 2.410834  | 12.89063  | 17.92579 |          | 3.725    | 0       | 2169.75   | 20.26208 | 88.87281 | 2.410834 | 478.3895 | 0.072148 |          | 17.46123   |          |   |
| 9                                    | 24/07/2014 13:00 | 4         | 86.699 | 18.57287 |           | 2.645     | 12.20796 | 23.10624 |          | 3.95    | 0         | 2380.5   | 20.67232 | 86.61785 | 2.645    | 522.0199 | 0.079457 |            | 17.48993 |   |
| 10                                   | 24/07/2014 13:15 | 5         | 88.794 | 18.25184 | 2.659166  | 18.91127  | 17.7386  |          | 4.025    | 0       | 2393.25   | 20.33365 | 87.75546 | 2.659166 | 312.4875 | 0.050609 |          | 17.53331   |          |   |
| 11                                   | 24/07/2014 13:30 | 6         | 89.312 | 18.12486 |           | 2.675     | 15.35799 | 15.77241 |          | 3.65    | 0         | 2407.5   | 19.95557 | 89.11808 | 2.675    | 316.0233 | 0.049778 |            | 17.57234 |   |
| 12                                   | 24/07/2014 13:45 | 7         | 89.902 | 18.36222 | 2.501667  | 14.23877  | 20.57897 |          | 3.65     | 0       | 2251.5    | 20.07751 | 89.77431 | 2.501667 | 345.8717 | 0.053511 |          | 17.60563   |          |   |
| 13                                   | 24/07/2014 14:00 | 8         | 89.324 | 18.35713 | 2.621666  | 11.54204  | 20.25539 |          | 4.25     | 0       | 2359.5    | 20.16678 | 89.25173 | 2.621666 | 352.5677 | 0.0544   |          | 17.63952   |          |   |
| 14                                   | 24/07/2014 14:15 | 9         | 88.96  | 18.31128 | 2.536667  | 16.55458  | 16.76369 |          | 3.95     | 0       | 2283      | 20.04696 | 89.65866 | 2.536667 | 371.6696 | 0.056368 |          | 17.6685    |          |   |
| 15                                   | 24/07/2014 14:30 | 10        | 89.402 | 18.32501 | 2.029166  | 29.70817  | 22.60049 |          | 4.025    | 0       | 1826.25   | 20.0866  | 89.51513 | 2.029166 | 294.1707 | 0.046842 |          | 17.6943    |          |   |
| 16                                   | 24/07/2014 14:45 | 11        | 89.52  | 18.24205 | 2.181111  | 32.76543  | 19.48586 |          | 3.425    | 0       | 1963      | 19.9595  | 89.75423 | 2.181111 | 306.2612 | 0.04773  |          | 17.71758   |          |   |
| 17                                   | 24/07/2014 15:00 | 12        | 90.105 | 18.4624  |           | 2.03      | 46.48006 | 21.02508 |          | 3.575   | 0         | 1827     | 20.11172 | 90.14951 |          | 2.03     | 416.744  | 0.061836   | 17.73986 |   |
| 18                                   | 24/07/2014 15:15 | 13        | 92.38  | 18.56895 | 2.230834  | 45.75605  | 19.96396 |          | 3.425    | 0       | 2007.75   | 20.10909 | 90.76907 | 2.230834 | 406.787  | 0.059348 |          | 17.76194   |          |   |
| 19                                   | 24/07/2014 15:30 | 14        | 94.375 | 18.81122 | 2.408333  | 46.29974  | 19.50375 |          | 3.95     | 0.2     | 2167.5    | 19.8853  | 93.44483 | 2.408333 | 465.0237 | 0.063996 |          | 17.79721   |          |   |
| 20                                   | 24/07/2014 15:45 | 15        | 92.945 | 18.78055 |           | 2.84      | 42.18691 | 17.7943  |          | 4.325   | 0         | 2556     | 19.82528 | 93.60974 |          | 2.84     | 503.7448 | 0.066272   | 17.80898 |   |
| 21                                   | 24/07/2014 16:00 | 16        | 88.906 | 18.74327 | 2.801667  | 52.68803  | 20.44905 |          | 4.775    | 0       | 2521.5    | 20.11521 | 91.73662 | 2.801667 | 709.9618 | 0.095873 |          | 17.83566   |          |   |
| 22                                   | 24/07/2014 16:15 | 17        | 85.758 | 18.84418 | 2.694166  | 51.1376   | 20.15979 |          | 4.1      | 0       | 2424.75   | 20.90249 | 87.94225 | 2.694166 | 699.1094 | 0.098511 |          | 17.86679   |          |   |
| 23                                   | 24/07/2014 16:30 | 18        | 86.207 | 18.49306 |           | 2.605     | 55.02975 | 21.71061 |          | 4.25    | 0         | 2344.5   | 20.84963 | 86.30295 |          | 2.605    | 467.5997 | 0.065196   | 17.91065 |   |
| 24                                   | 24/07/2014 16:45 | 19        | 85.39  | 18.82167 | 2.946667  | 51.23436  | 18.72028 |          | 4.625    | 0       | 2652      | 20.97103 | 87.44316 | 2.946667 | 678.2013 | 0.094993 |          | 17.9471    |          |   |
| 25                                   | 24/07/2014 17:00 | 20        | 85.51  | 19.08923 | 2.850833  | 45.78878  | 18.31455 |          | 4.4      | 0       | 2565.75   | 21.67689 | 85.14653 | 2.850833 | 724.1357 | 0.105035 |          | 17.9826    |          |   |
| 26                                   | 24/07/2014 17:15 | 21        | 85.953 | 19.0165  | 2.4725    | 43.44919  | 21.24154 |          | 4.1      | 0       | 2225.25   | 21.61127 | 85.1073  | 2.4725   | 540.4314 | 0.078304 |          | 18.0325    |          |   |
| 27                                   | 24/07/2014 17:30 | 22        | 85.199 | 19.09444 | 3.335833  | 37.86438  | 12.20976 |          | 5.075    | 0       | 3002.25   | 21.55219 | 85.82753 | 3.335833 | 644.188  | 0.091285 |          | 18.07903   |          |   |
| 28                                   | 24/07/2014 17:45 | 23        | 86.248 | 18.96124 |           | 3.24      | 36.31569 | 21.66322 |          | 4.7     | 0         | 2916     | 21.35976 | 86.12592 |          | 3.24     | 643.0263 | 0.090716   | 18.13081 |   |
| 29                                   | 24/07/2014 18:00 | 24        | 86.191 | 18.95448 | 3.039167  | 37.04486  | 16.17148 |          | 4.75     | 0       | 2795.25   | 21.54253 | 85.135   | 3.039167 | 473.4818 | 0.067419 |          | 18.18071   |          |   |
| 30                                   | 24/07/2014 18:15 | 25        | 89.703 | 18.56239 | 2.686667  | 36.07279  | 17.32737 |          | 4.1      | 0       | 2418      | 20.53518 | 88.37909 | 2.686667 | 231.6537 | 0.012611 |          | 18.23485   |          |   |
| 31                                   | 24/07/2014 18:30 | 26        | 89.908 | 18.48109 | 2.634167  | 39.25399  | 12.94467 |          | 3.8      | 0       | 2370.75   | 20.24869 | 89.49282 | 2.634167 | 205.2631 | 0.010707 |          | 18.2647    |          |   |
| 32                                   | 24/07/2014 18:45 | 27        | 90.806 | 18.41432 | 2.411666  | 40.22778  | 16.96518 |          | 3.65     | 0       | 2170.5    | 20.00295 | 90.48497 | 2.411666 | 194.2496 | 0.009779 |          | 18.2847    |          |   |
| 33                                   | 24/07/2014 19:00 | 28        | 91.031 | 18.44652 | 2.015933  | 40.18727  | 15.07771 |          | 3.275    | 0       | 1814.25   | 20.01809 | 90.58265 | 2.015933 | 182.4312 | 0.009238 |          | 18.29176   |          |   |
| 34                                   | 24/07/2014 19:15 | 29        | 90.684 | 18.50285 | 1.908334  | 48.8406   | 17.88496 |          | 3.65     | 0       | 1717.5    | 20.04237 | 90.76615 | 1.908334 | 189.6538 | 0.009685 |          | 18.28497   |          |   |
| 35                                   | 24/07/2014 19:30 | 30        | 91.113 | 18.55726 |           | 1.935     | 45.34613 | 19.71705 |          | 3.2     | 0         | 1741.5   | 19.99915 | 91.32021 |          | 1.935    | 193.7637 | 0.009764   | 18.27608 |   |
| 36                                   | 24/07/2014 19:45 | 31        | 91.342 | 18.57698 | 1.793334  | 57.10773  | 18.08055 |          | 2.9      | 0       | 1614      | 20.06963 | 91.03464 | 1.793334 | 189.1875 | 0.009664 |          | 18.26421   |          |   |
| 37                                   | 24/07/2014 20:00 | 32        | 90.604 | 18.53332 |           | 1.6875    | 54.64287 | 19.21736 |          | 3.05    | 0         | 1518.75  | 19.97717 | 91.30819 |          | 1.6875   | 173.6782 | 0.008632   | 18.25112 |   |
| 38                                   | 24/07/2014 20:15 | 33        | 90.968 | 18.51246 | 1.086389  | 50.89159  | 23.66541 |          | 2.45     | 0       | 977.75    | 19.98827 | 91.12614 | 1.086389 | 137.6018 | 0.006319 |          | 18.24881   |          |   |

# Drain Flows

## Con Lehane-Ballinagree



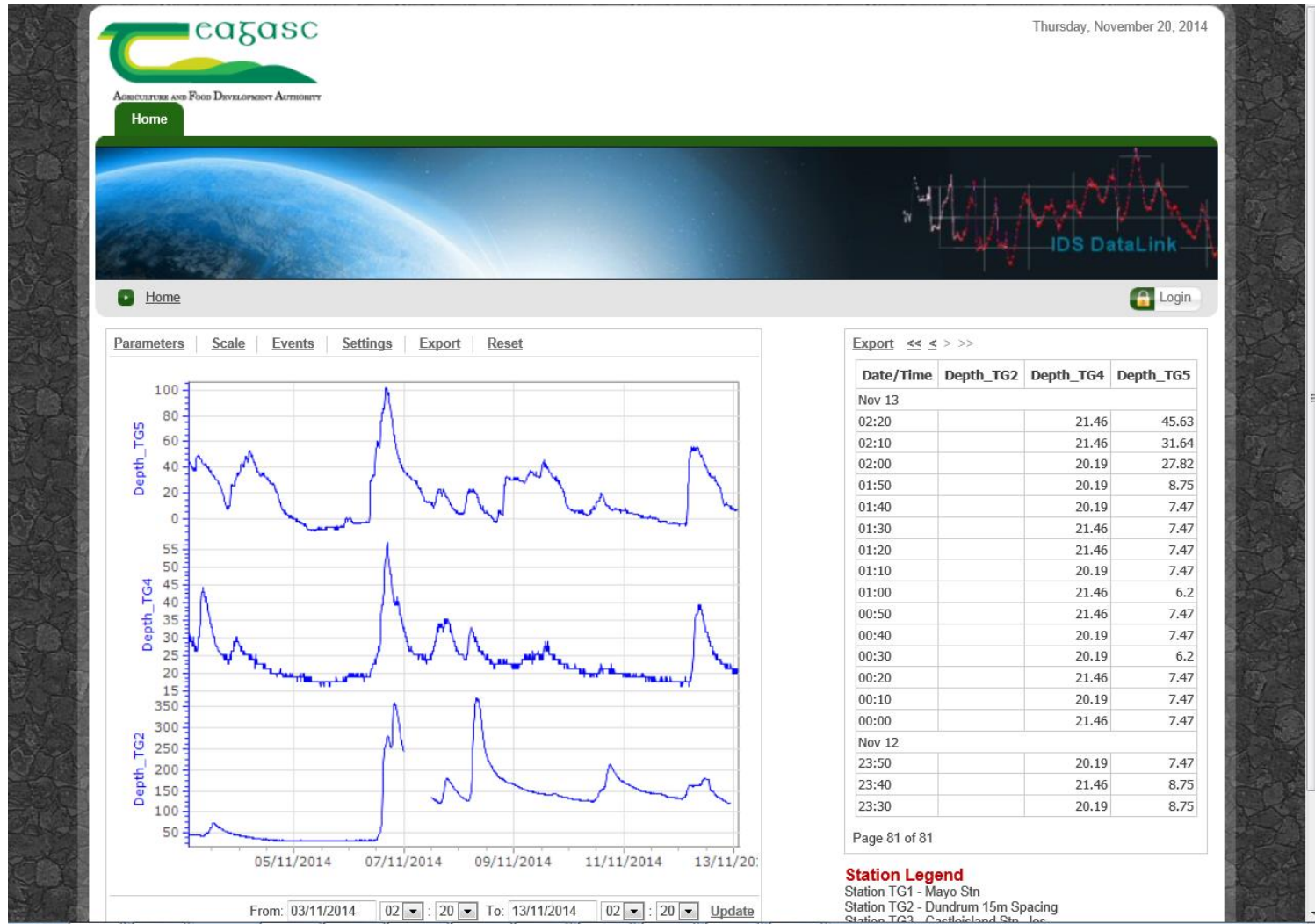


# Drain Flows

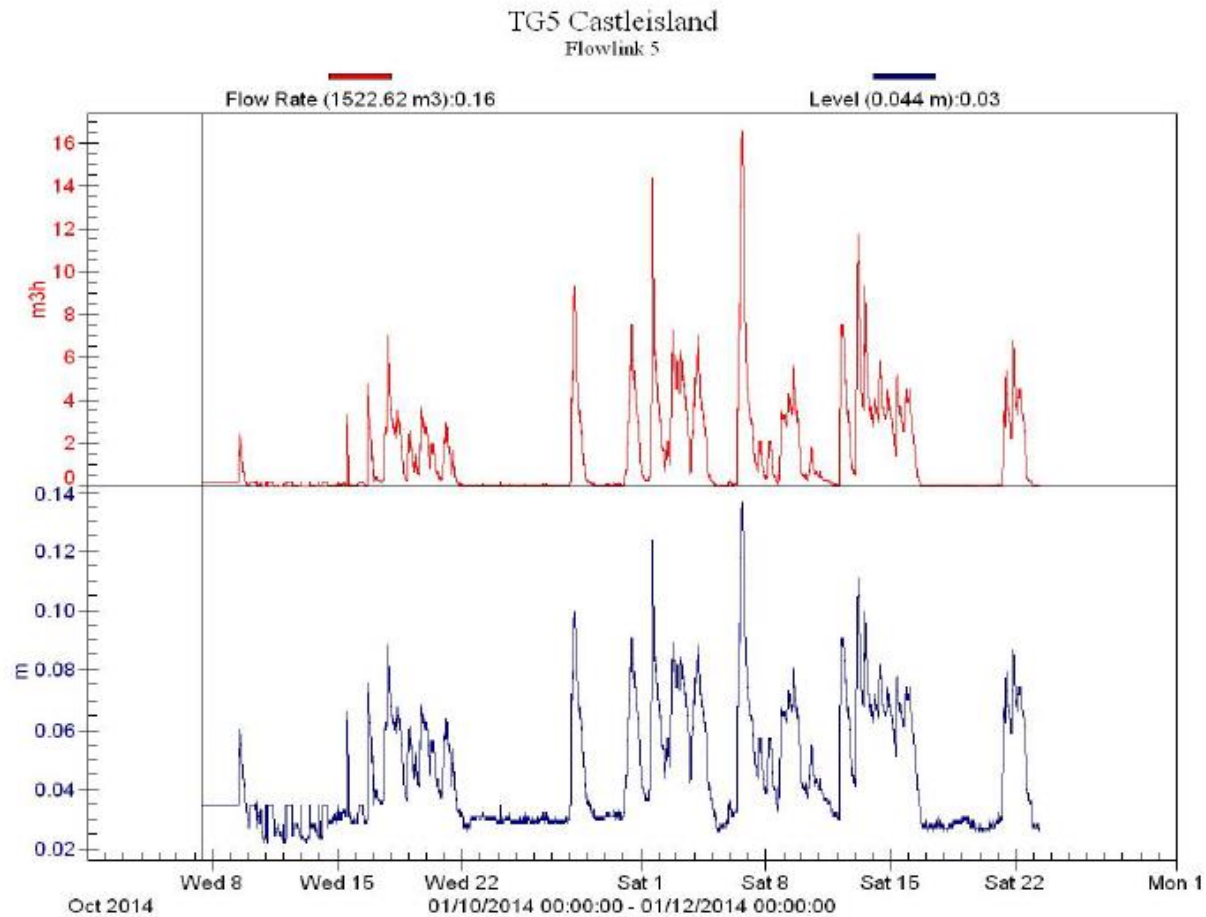


Alan Wood x 1  
Danny Bermingham x 1  
John Leahy x 1  
TJ Ryan x 2  
John O Sullivan x 2

# Drain Flows

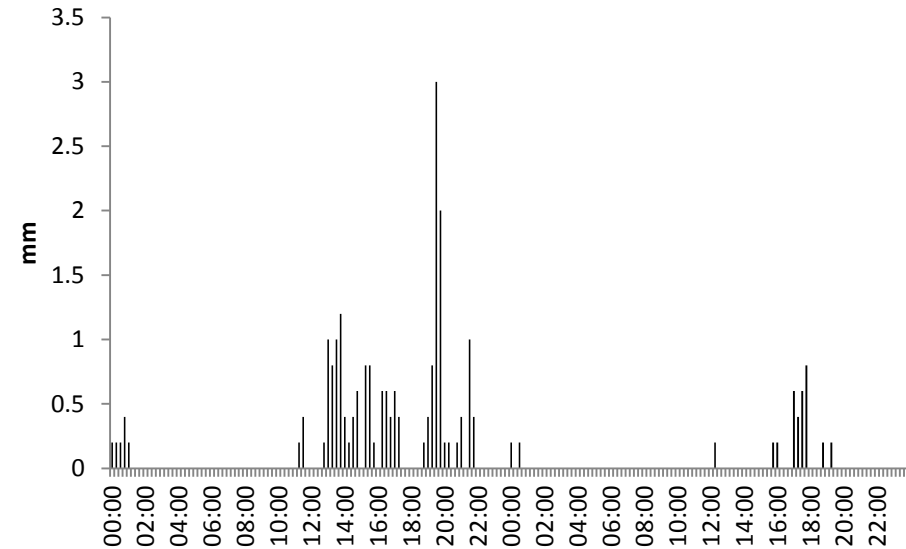


# Drain Flows

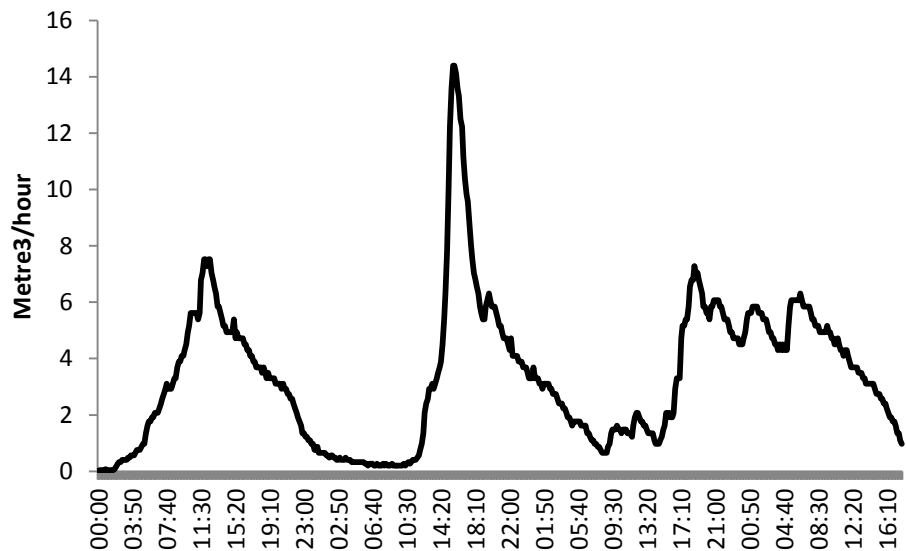
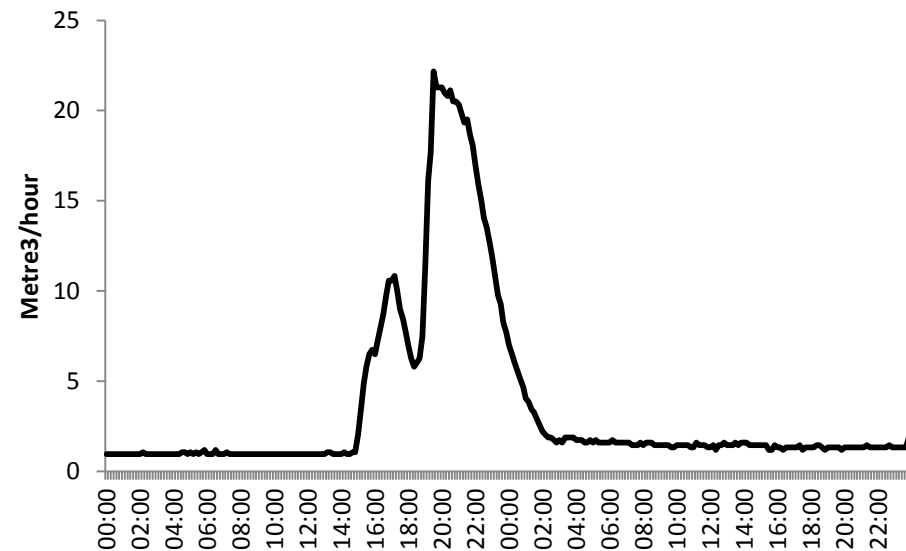
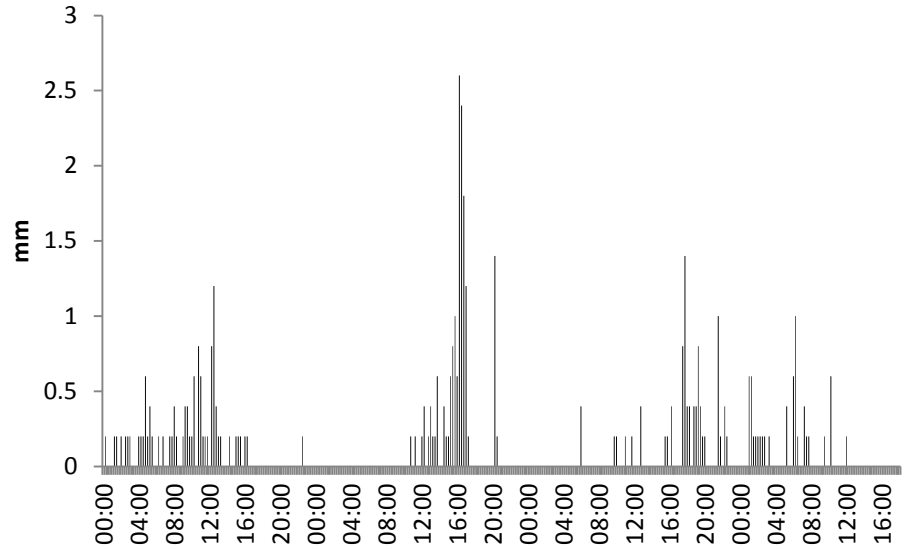


# Drain Flows

TJ Ryan (30 m): 6<sup>th</sup>/7<sup>th</sup> November

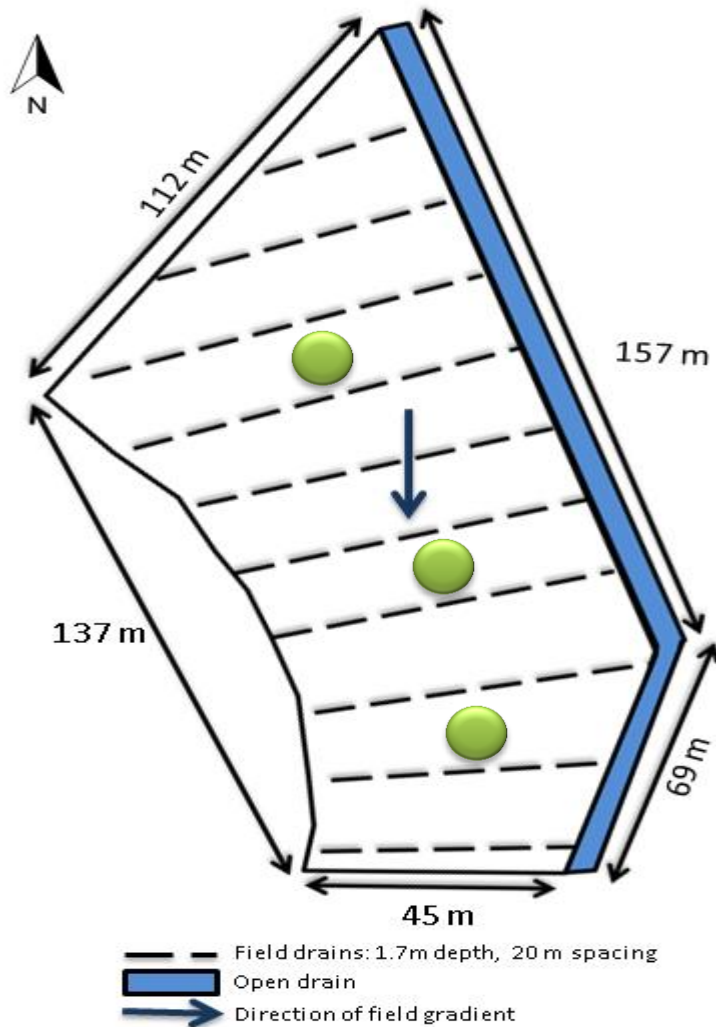


John O' Sullivan: 31<sup>st</sup>-3<sup>rd</sup> November

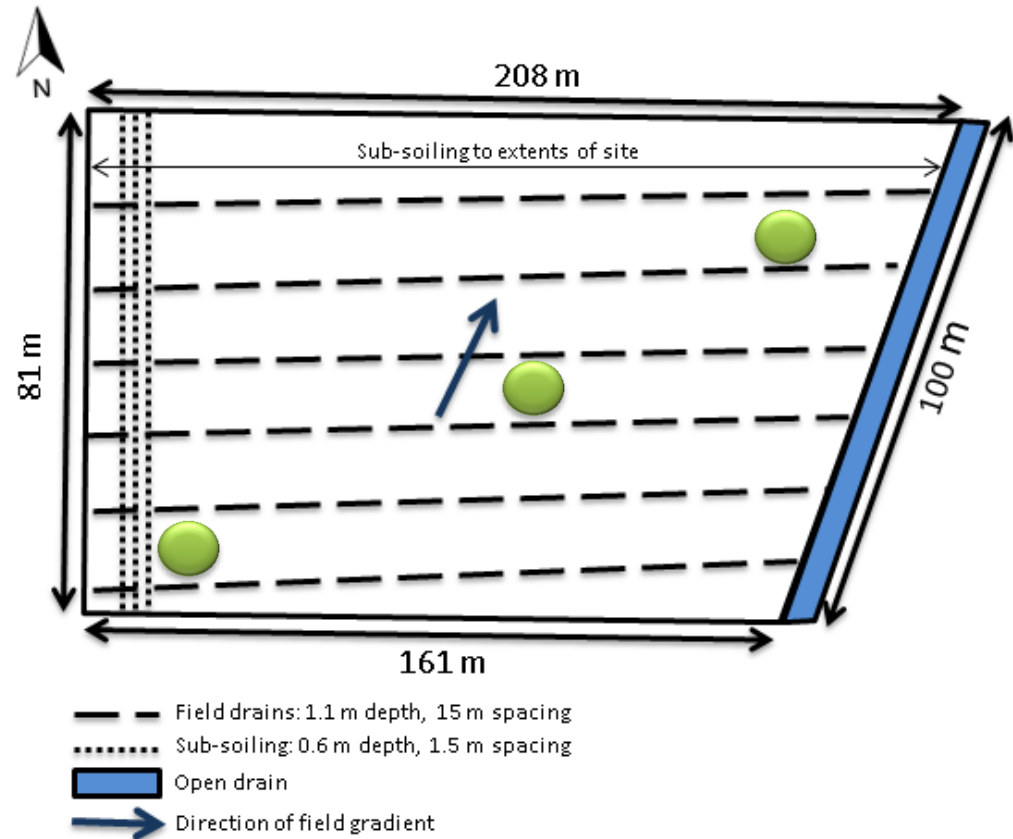


# Watertable level wells

Ballinagree

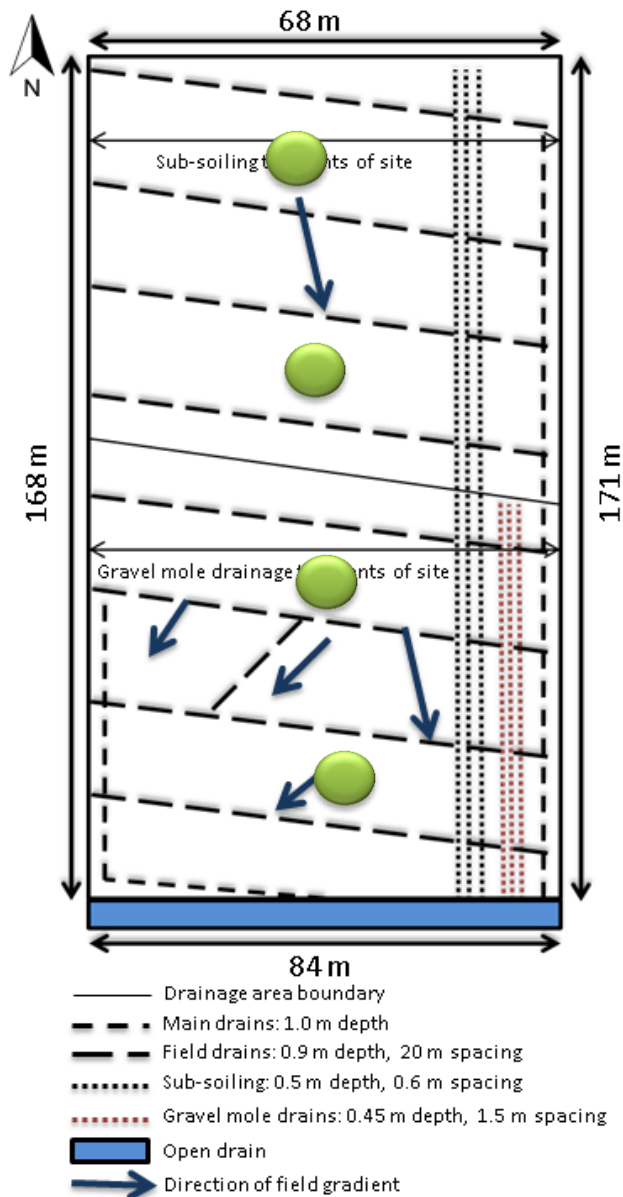


Kishkeam

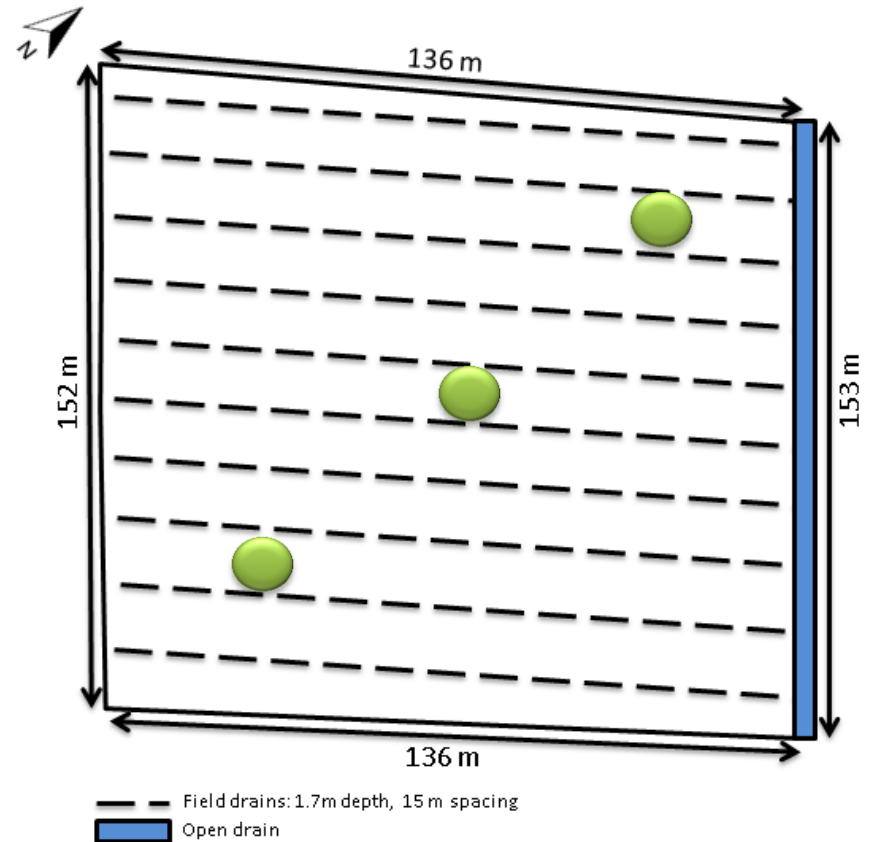


# Watertable level wells

Castleisland

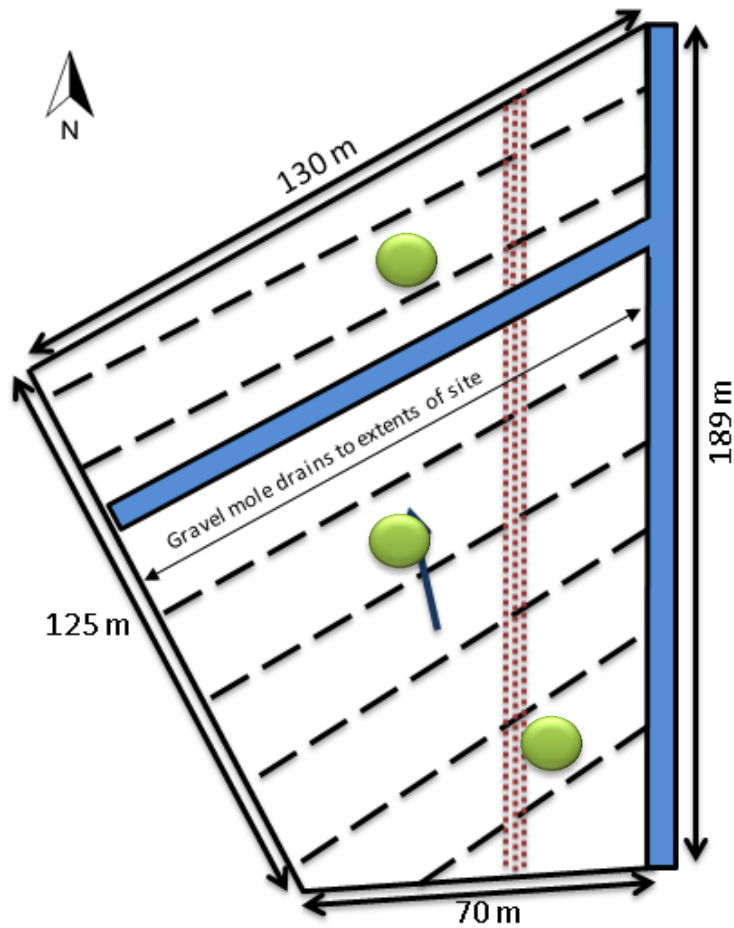


Lisselton



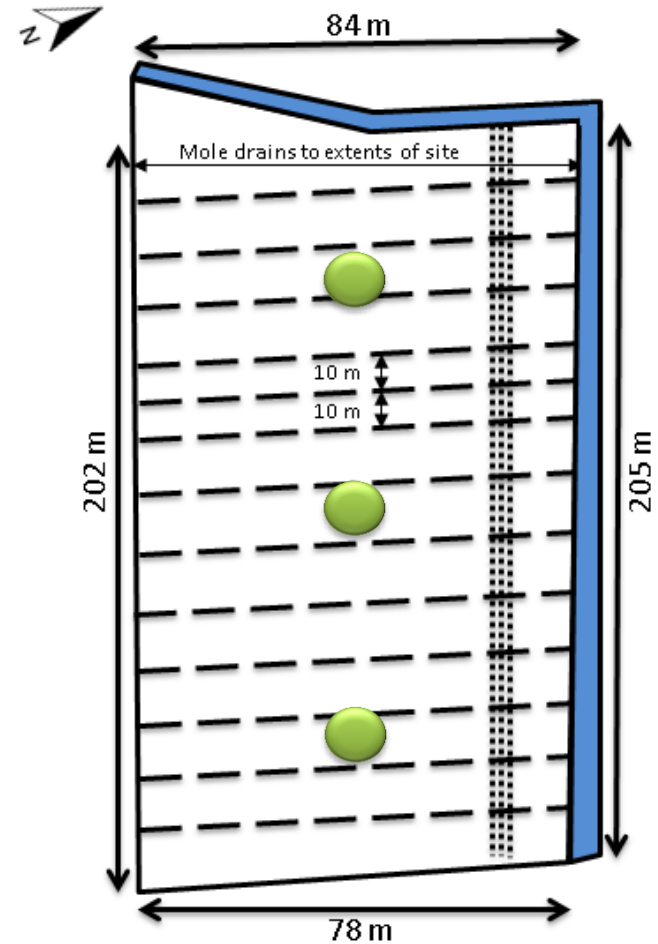
# Watertable level wells

Athea



- Field drains: 0.9 m depth, 20 m spacing
- ... Gravel mole drains: 0.45 m depth, 1.5 m spacing
- █ Open drain
- Direction of field gradient

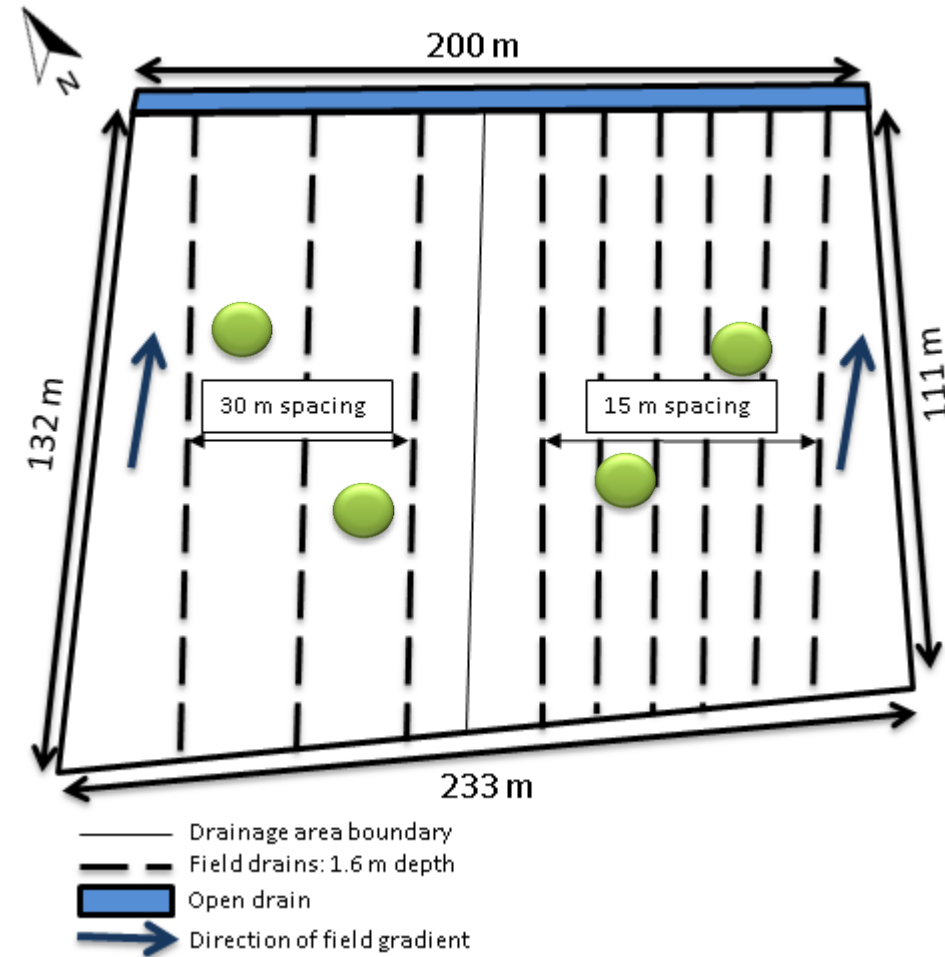
Doonbeg



- Field drains: 0.9 m depth, 15 m spacing unless otherwise stated
- ... Mole drains: 0.6 m depth, 1.4 m spacing
- █ Open drain

# Watertable levels well

## Rossmore



- 30 wells in total
- 0.8 m to 2.0 m deep
- Recording until June 2015
- Water sampling points
- Alan Wood-Crossmolina in new year

# Water samplers

