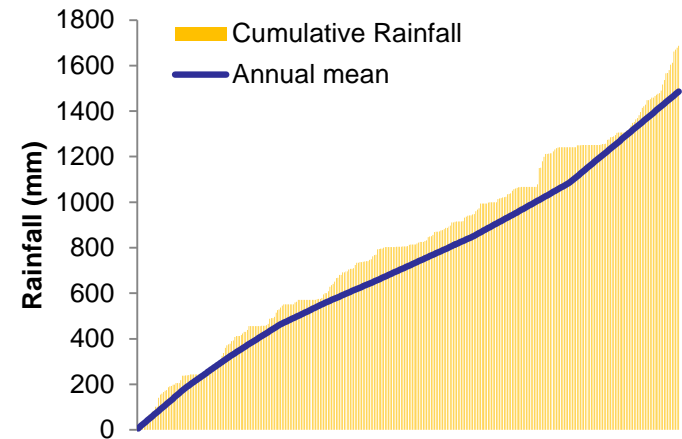
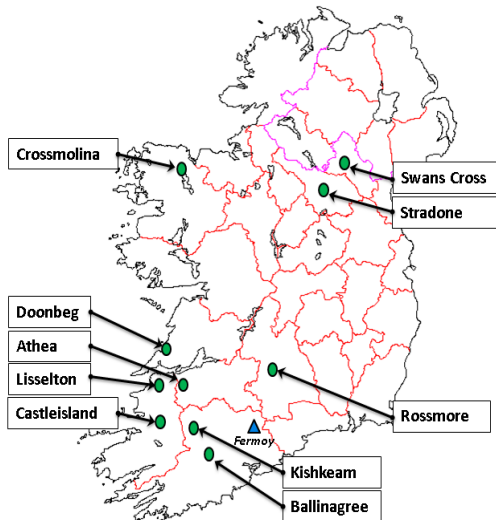
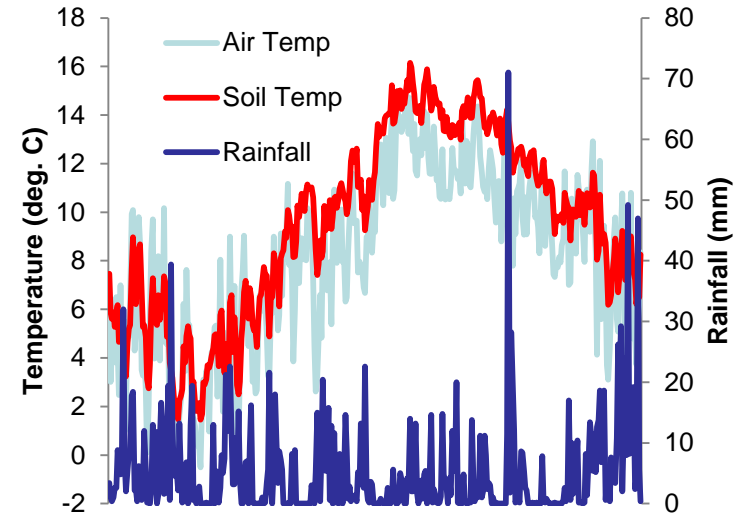
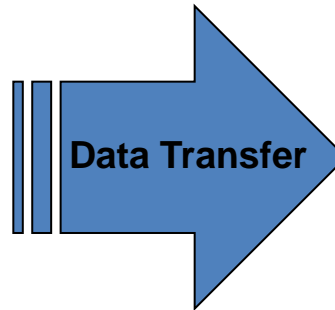


# Heavy Soils Programme Review Jan. 31st 2018

## Update of 2017 measurements and related work

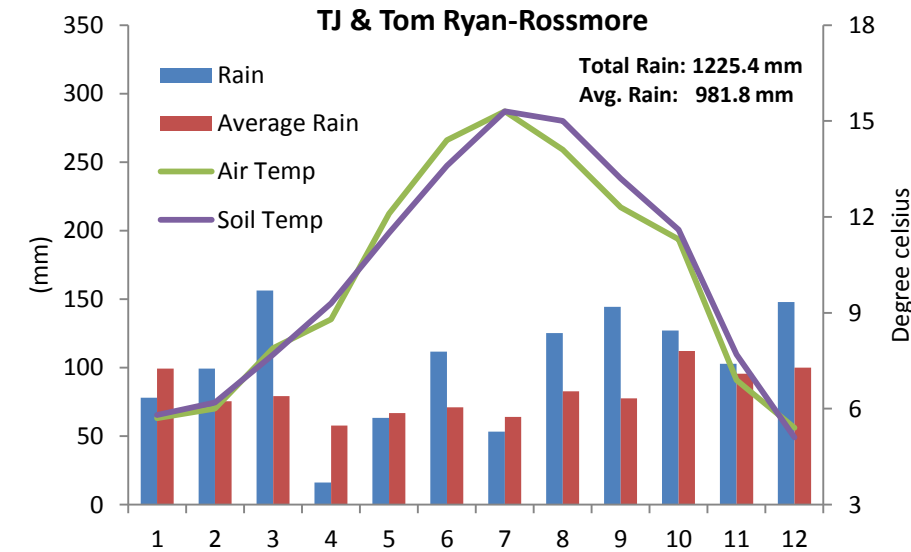
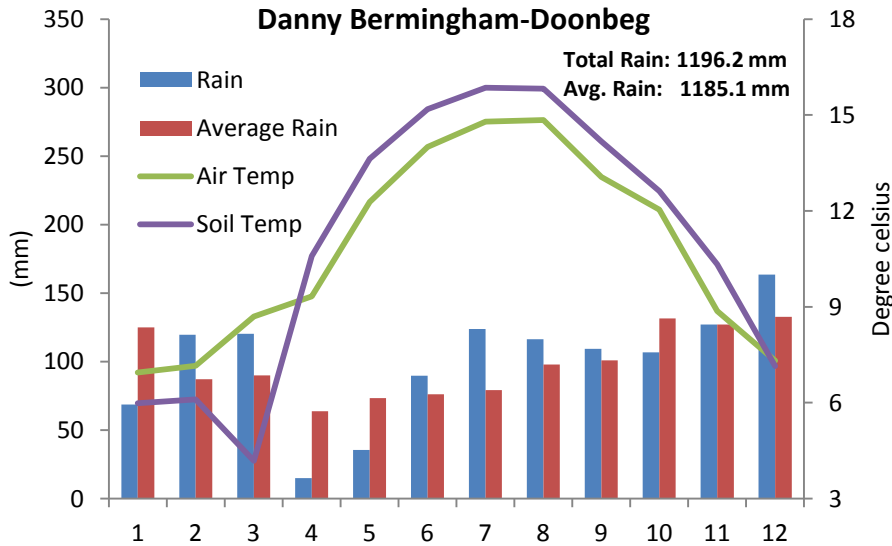
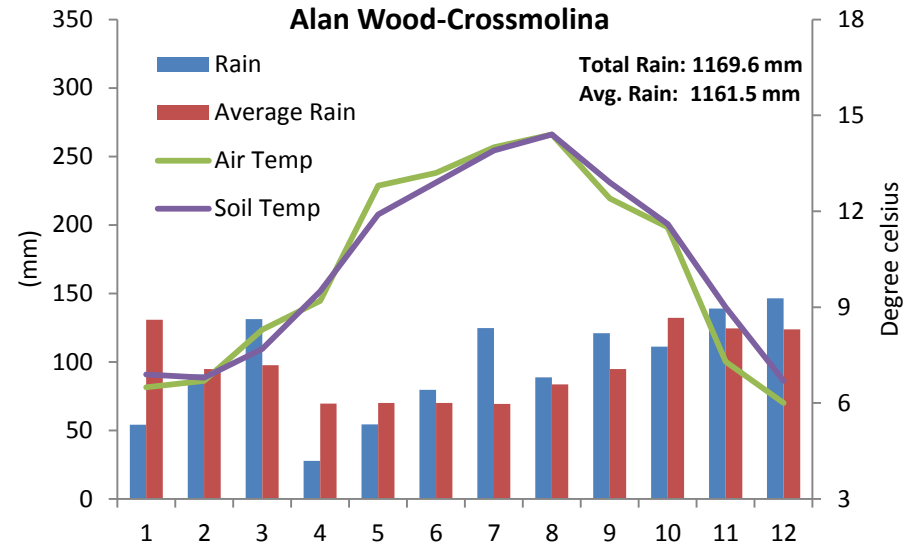
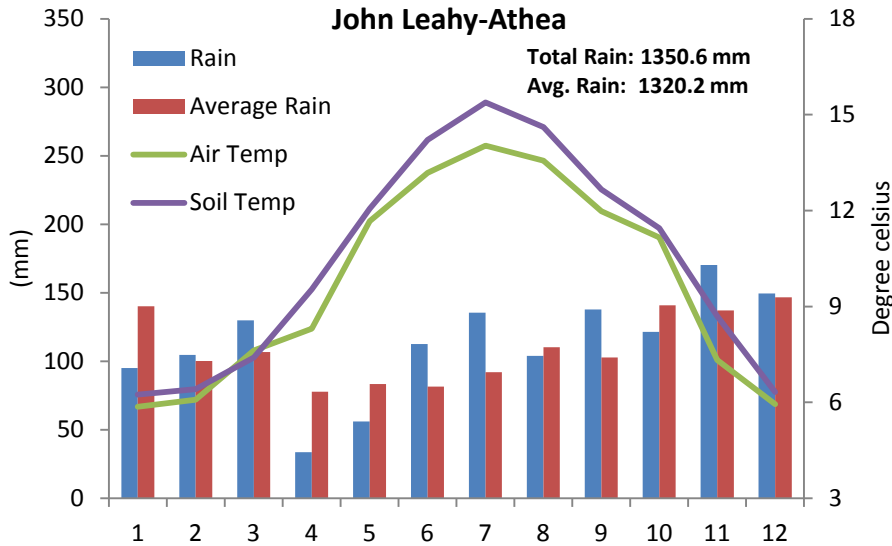


# Weather data

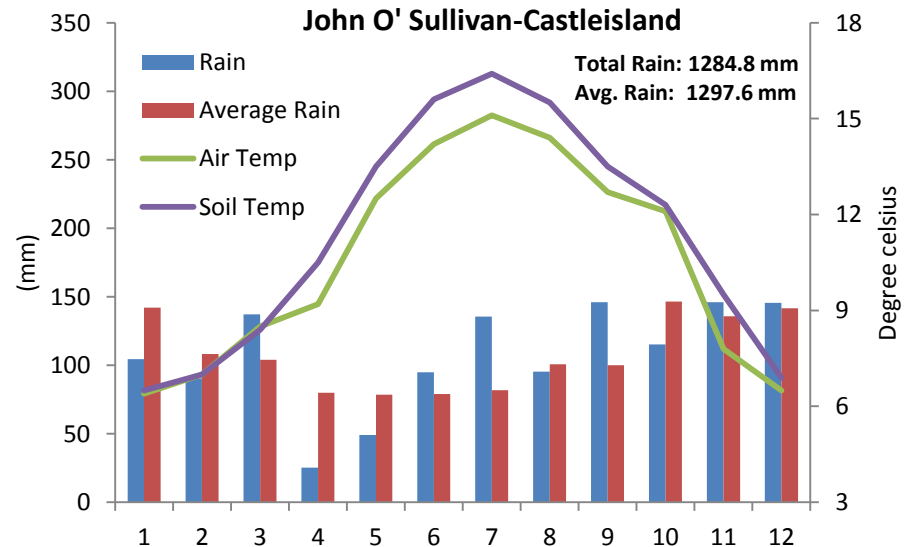
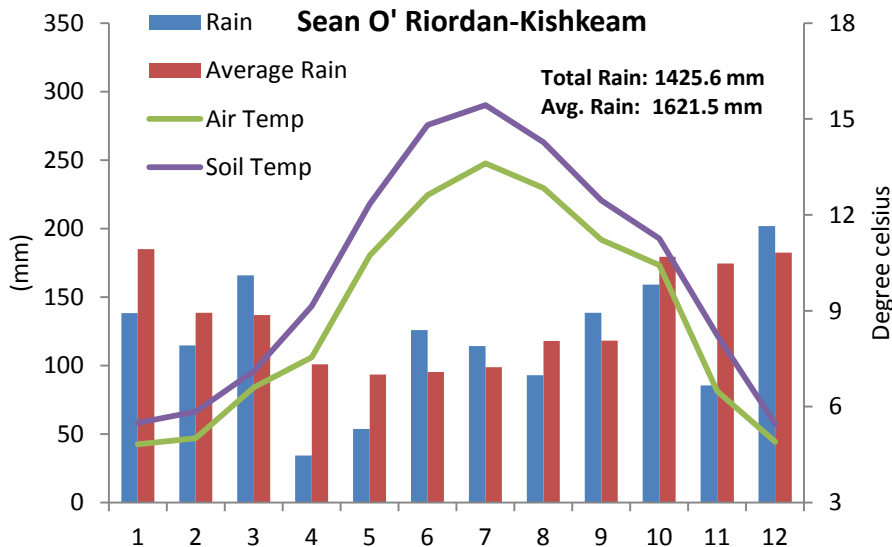
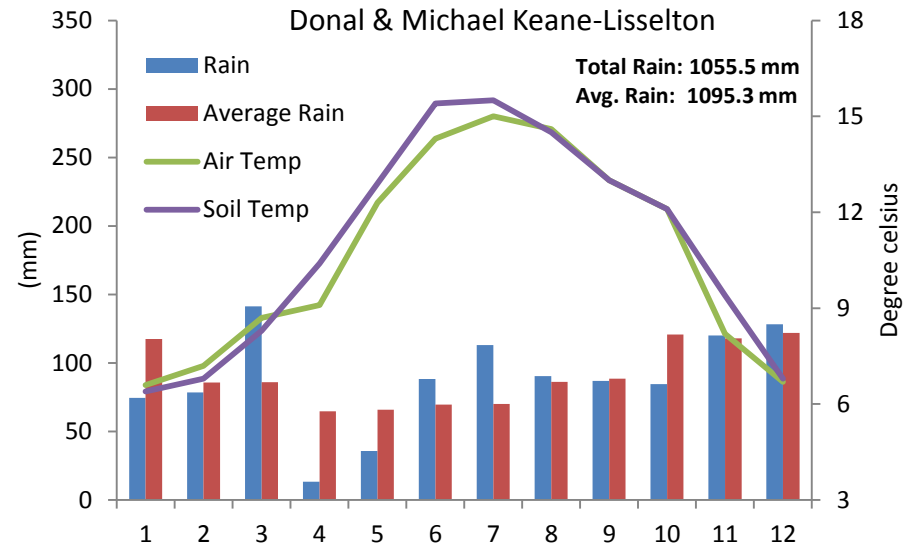
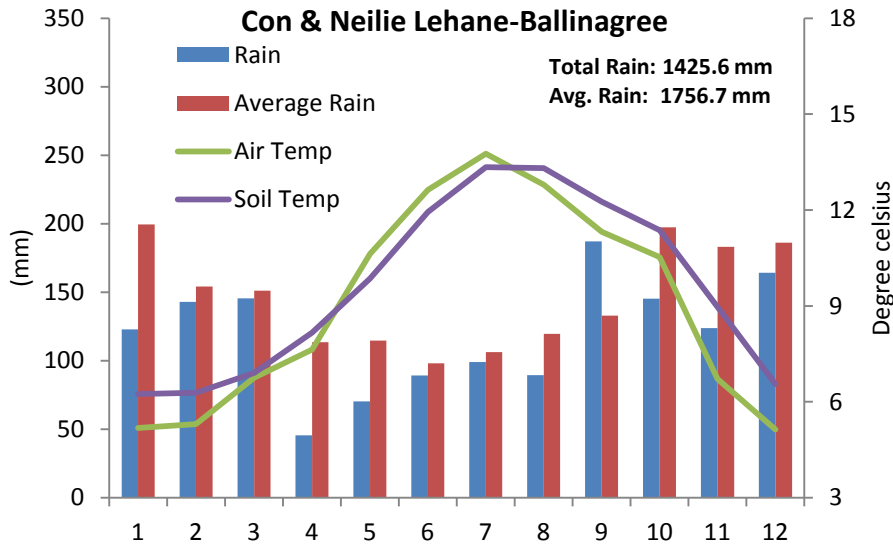


<https://www.teagasc.ie/crops/grassland/heavy-soils/weather-data/>

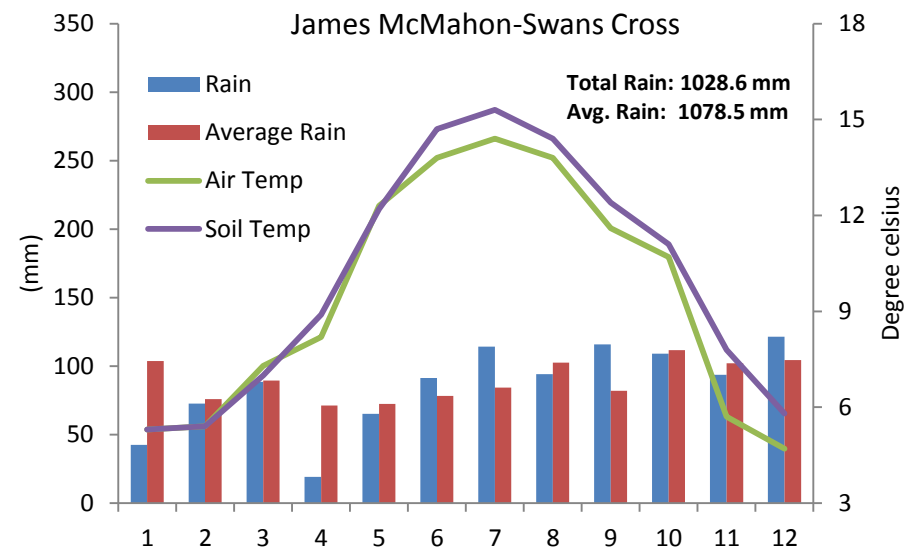
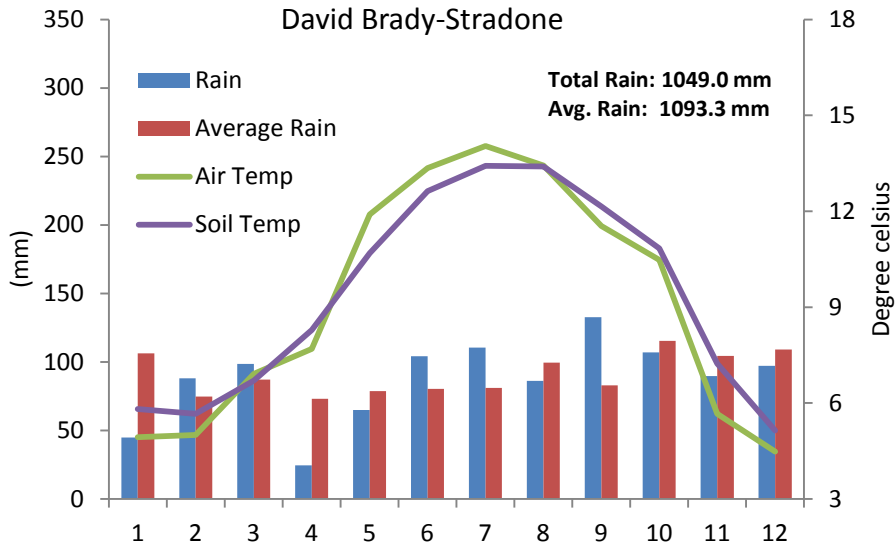
# 2017 Weather Summaries



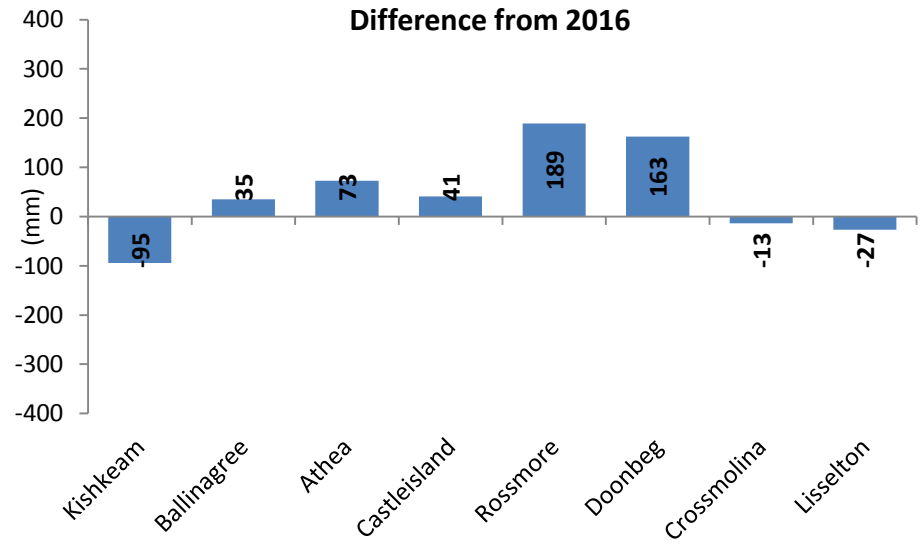
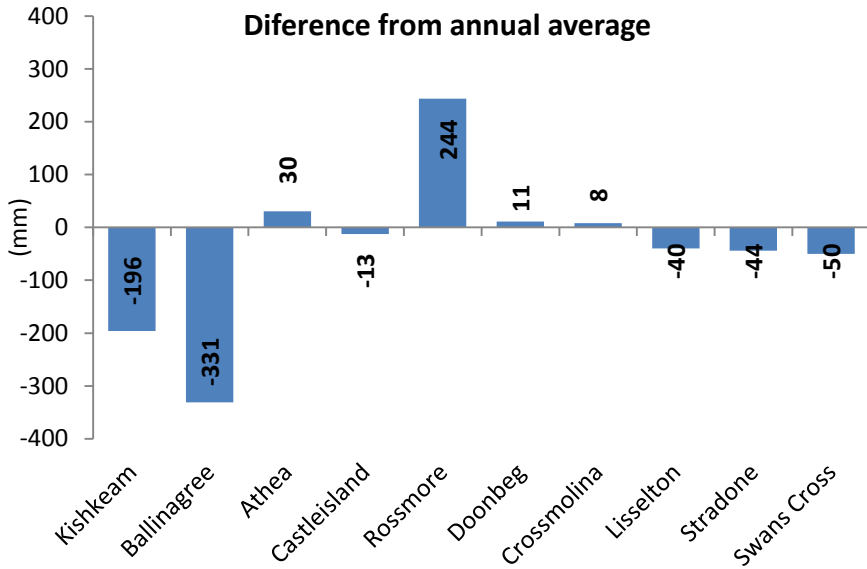
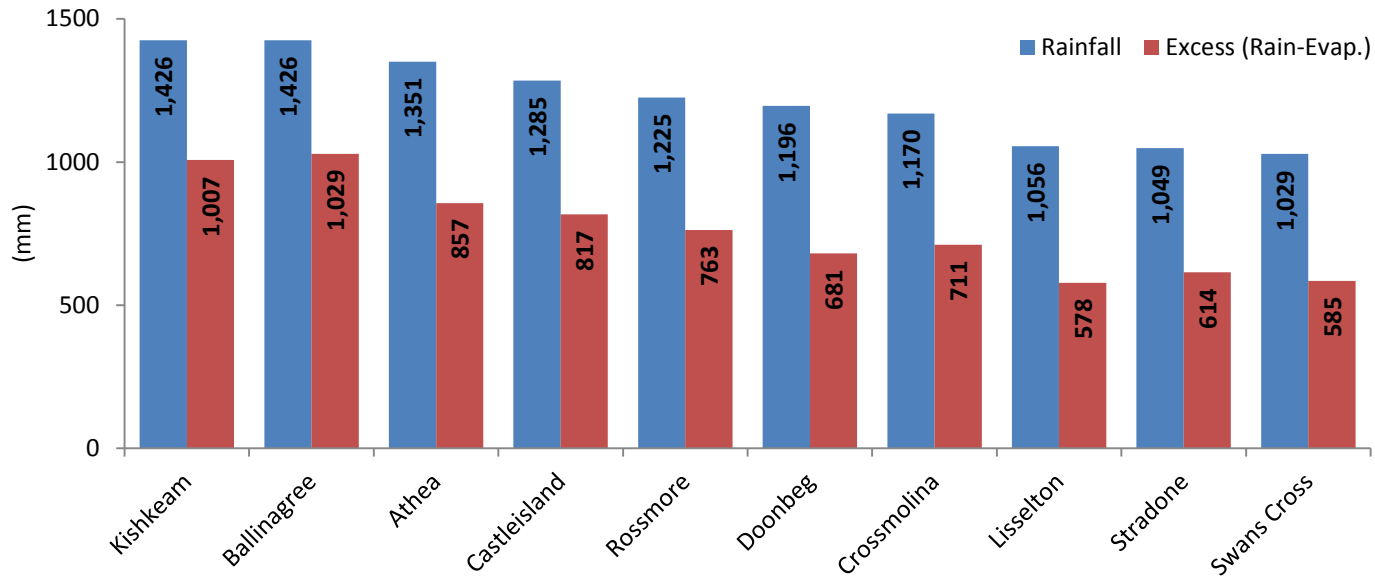
# 2017 Weather Summaries



# 2017 Weather Summaries



# 2017 Weather Summaries





## 2017 Monthly Rainfall summary

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Kishkeam	138.4	114.8	165.8	34.4	53.8	126.0	114.2	93.0	138.6	159.2	85.6	201.8	<b>1425.6</b>
Ballinagree	122.8	143.0	145.6	45.6	70.4	89.2	99.0	89.6	187.0	145.4	123.8	164.2	<b>1425.6</b>
Athea	95.2	104.6	129.8	33.8	56.0	112.6	135.4	104.0	137.8	121.4	170.4	149.6	<b>1350.6</b>
Castleisland	104.4	90.4	137.2	25.2	49.2	94.8	135.4	95.4	146.0	115.2	146.0	145.6	<b>1284.8</b>
Rossmore	78.0	99.2	156.4	16.2	63.4	111.6	53.4	125.2	144.4	127.0	102.8	147.8	<b>1225.4</b>
Doonbeg	68.8	119.6	120.4	15.0	35.6	89.8	123.8	116.4	109.4	106.8	127.0	163.6	<b>1196.2</b>
Crossmolina	54.2	91.0	131.4	27.8	54.4	79.7	124.7	88.8	121.0	111.2	139.0	146.4	<b>1169.6</b>
Lisselton	74.6	78.6	141.3	13.4	35.8	88.4	113.0	90.4	87.0	84.6	120.2	128.2	<b>1055.5</b>
Stradone	45.0	88.2	98.6	24.6	65.0	104.2	110.4	86.2	132.8	107.0	89.8	97.2	<b>1049.0</b>
Swans Cross	42.6	72.8	88.6	19.2	65.2	91.4	114.2	94.2	116	109.2	93.6	121.6	<b>1028.6</b>
<b>Average</b>	<b>82.4</b>	<b>100.2</b>	<b>131.5</b>	<b>25.5</b>	<b>54.9</b>	<b>98.8</b>	<b>112.4</b>	<b>98.3</b>	<b>132.0</b>	<b>118.7</b>	<b>119.8</b>	<b>146.6</b>	<b>1221.1</b>

## 2017 Totals summary

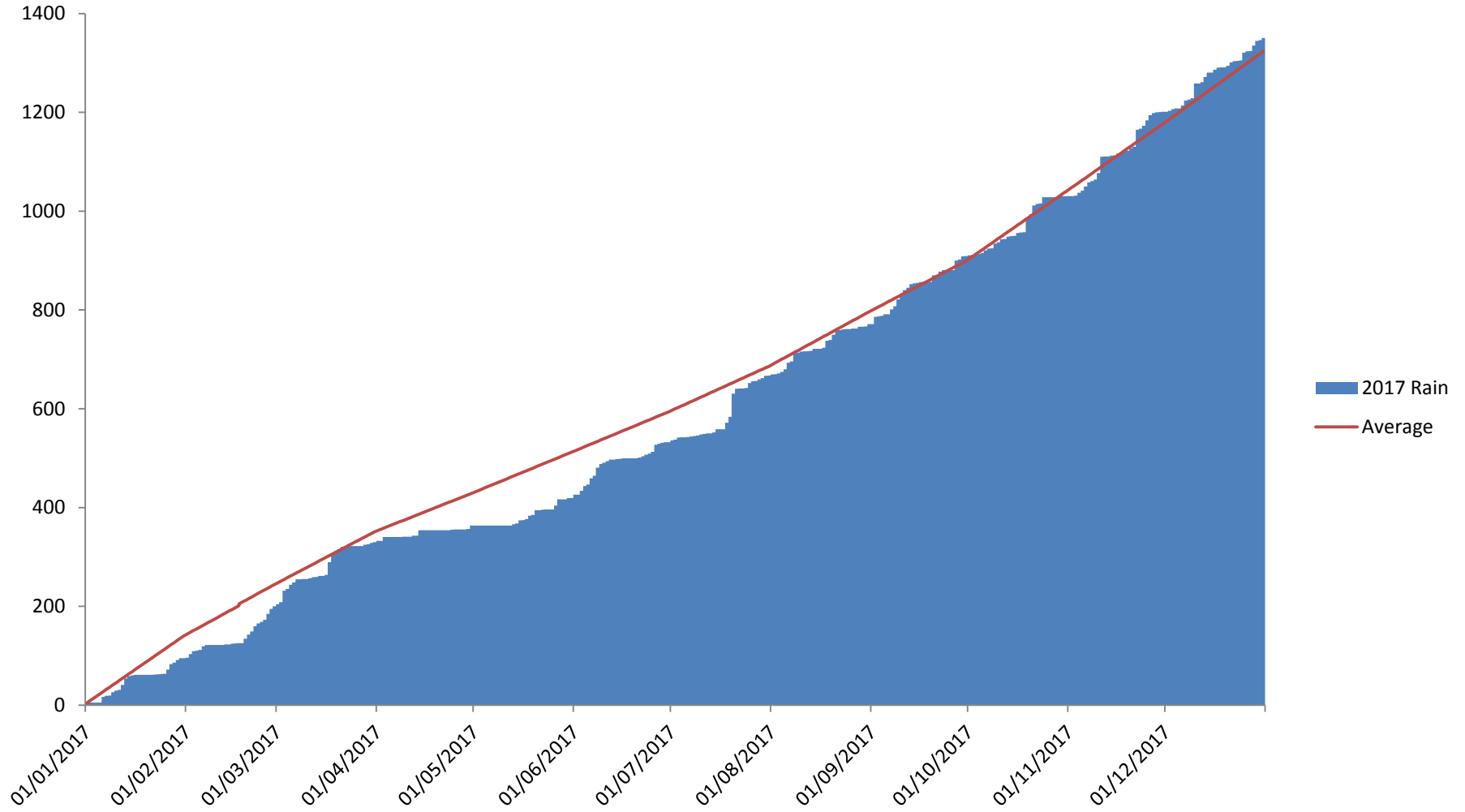
	Rainfall (mm)	Evap. (mm)	Excess (Rain-Evap)	Long Term Average (mm)	Difference from LTA (mm)
Kishkeam	1425.6	418.4	1007.2	1621.5	-195.9
Ballinagree	1425.6	396.7	1028.9	1756.7	-331.1
Athea	1350.6	493.7	856.9	1320.2	30.4
Castleisland	1284.8	467.6	817.2	1297.6	-12.8
Rossmore	1225.4	462.6	762.8	981.8	243.6
Doonbeg	1196.2	515.2	681.0	1185.1	11.1
Crossmolina	1169.6	458.3	711.3	1161.5	8.1
Lisselton	1055.5	477.2	578.3	1095.3	-39.8
Stradone	1049.0	434.6	614.4	1093.3	-44.3
Swans Cross	1028.6	443.8	584.8	1078.5	-49.9
<b>Mean</b>	<b>1221.1</b>	<b>456.8</b>	<b>764.3</b>	<b>1259.2</b>	<b>-38.1</b>

## Site details

Site	Northing	Westing	Elevation (m) ASL
Kishkeam	52°12'	09°08'	233
Ballinagree	51°59'	08°56'	231
Athea	52°27'	09°19'	139
Castleisland	52°13'	09°28'	36
Rossmore	52°36'	08°01'	105
Doonbeg	52°44'	09°30'	9
Crossmolina	54°06'	09°17'	15
Lisselton	52°28'	09°33'	8
Stradone	53°57'	07°11'	180
Swans Cross	54°09'	07°02'	115

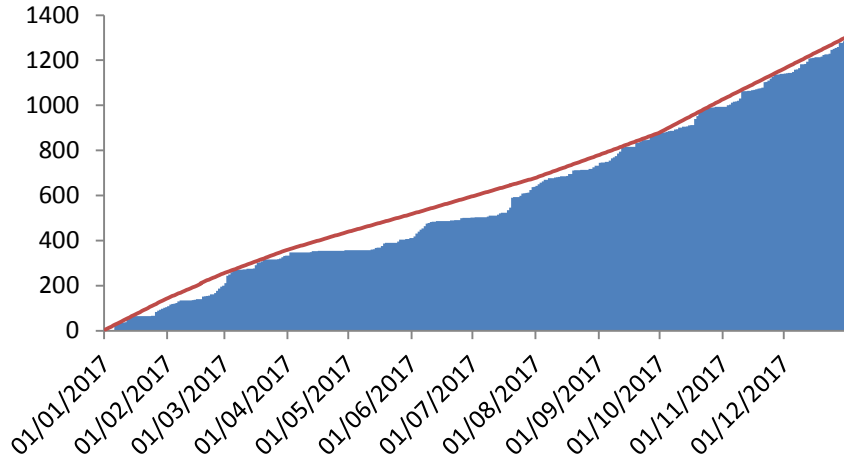
Note: ASL = above sea level

# John Leahy-Athea

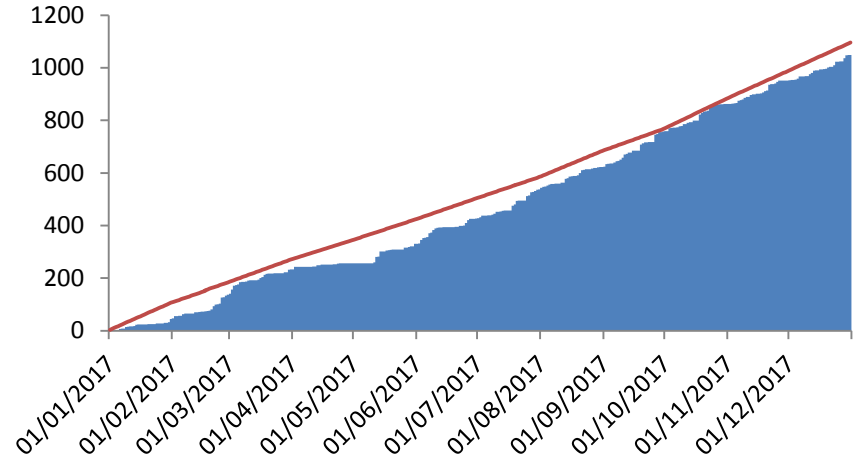




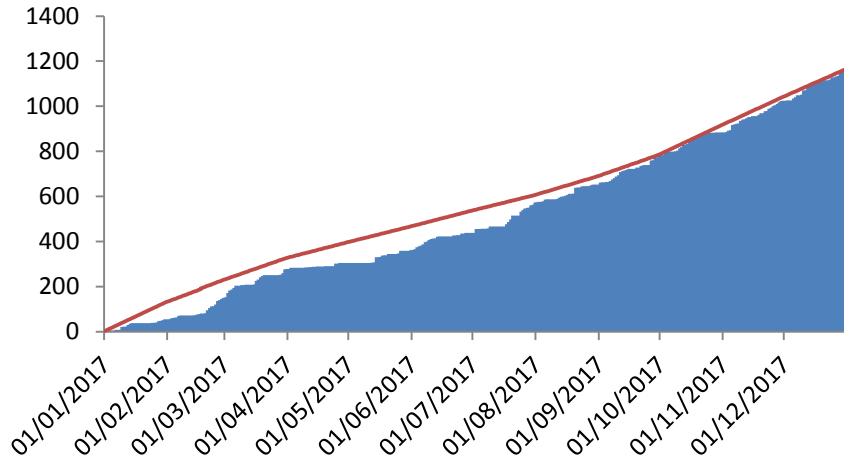
**John O' Sullivan-Castleisland**



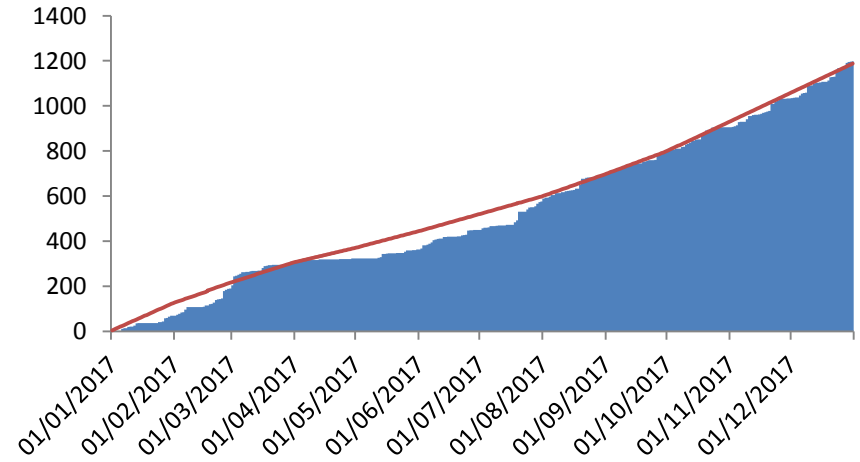
**David Brady-Stradone**



**Alan Wood-Crossmolina**

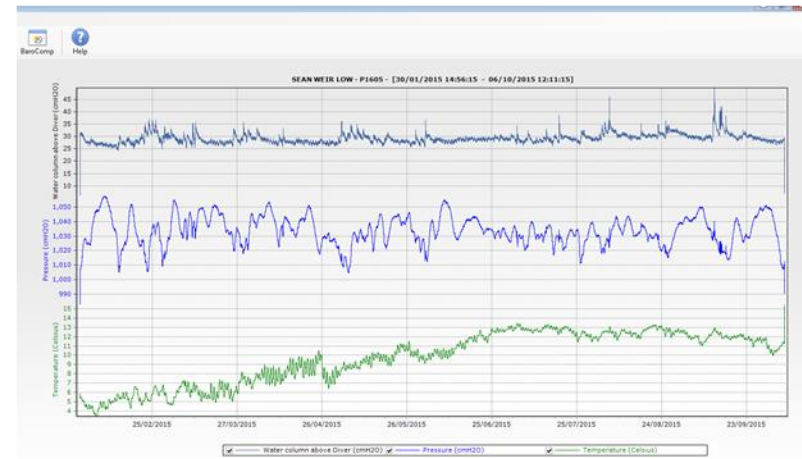
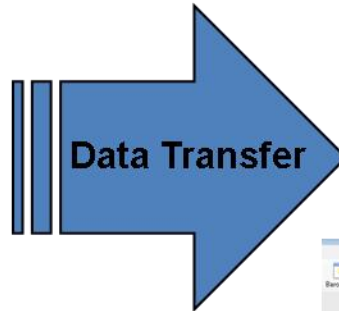
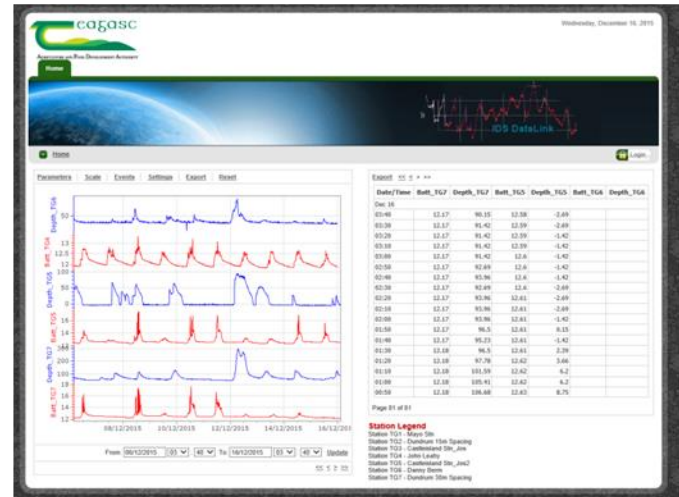


**Danny Bermingham-Doonbeg**



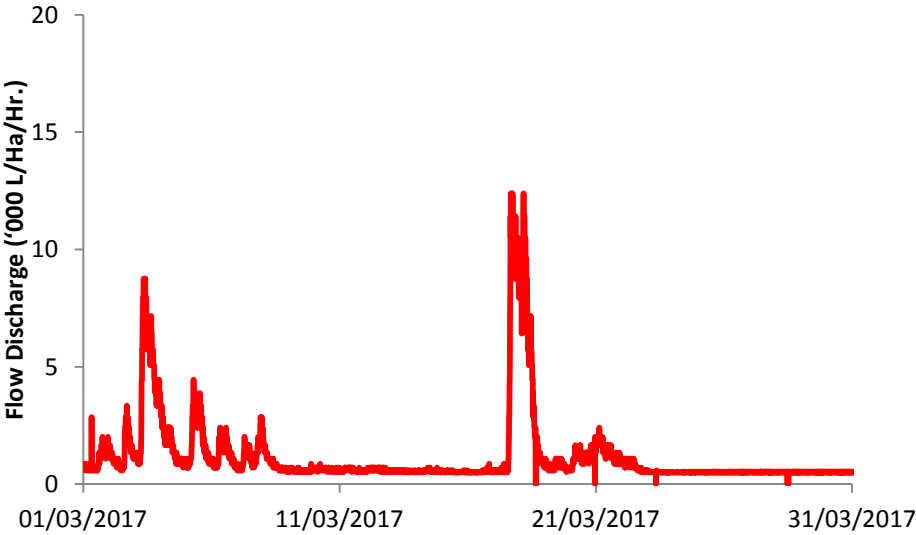
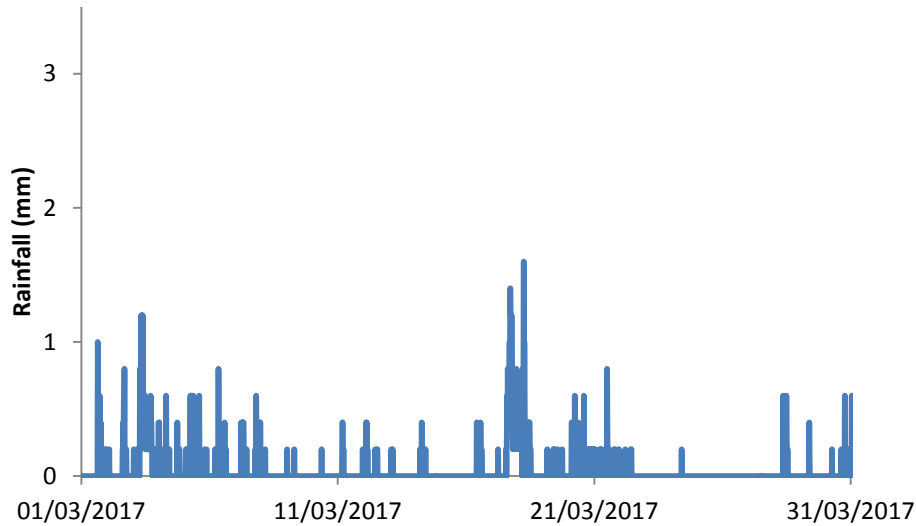
<b>July 20th - Oct 25th</b>				
	2017 Rainfall	Average Rainfall	Excess	No. of Dry Days (of 98)
Kishkeam	489.0	415.8	73.2	13
Ballinagree	509.8	449.4	60.4	8
Athea	469.9	359.5	110.4	12
Castleisland	465.4	347.7	117.7	14
Rossmore	442.6	273.6	169.0	22
Doonbeg	431.6	333.2	98.4	14
Crossmolina	406.2	309.7	96.5	15
Stradone	398.4	304.6	93.8	12
Swans Cross	402.8	304.6	98.2	14
Lisselton	351.8	297	54.8	15
<b>Average</b>	<b>436.8</b>	<b>339.5</b>	<b>97.2</b>	<b>13.9</b>

# Drain Performance: Flow discharge

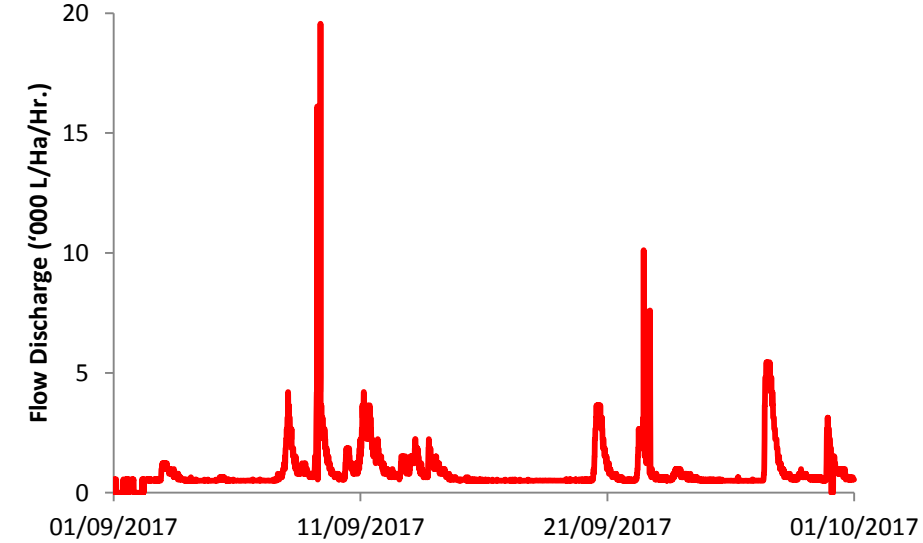
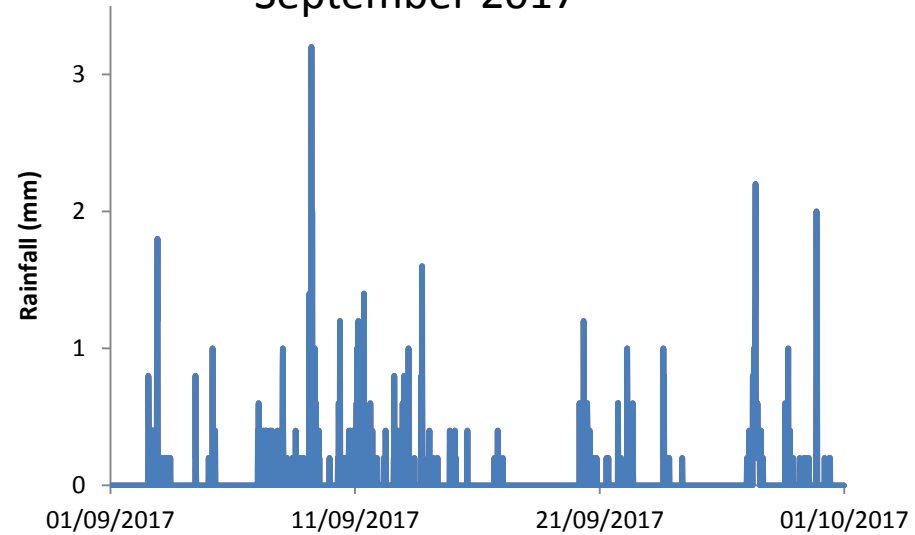


# Drainage system performance: Athea

March 2017



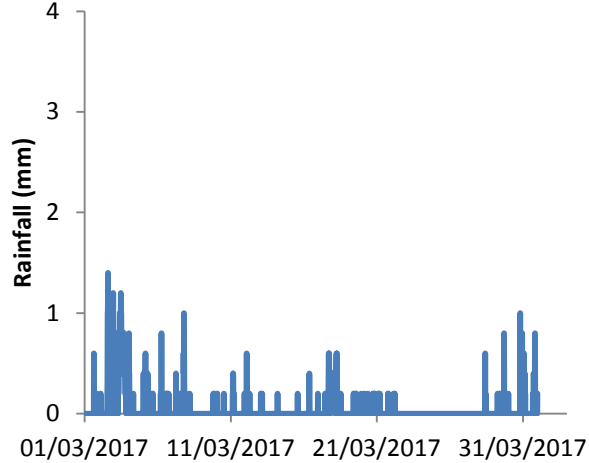
September 2017



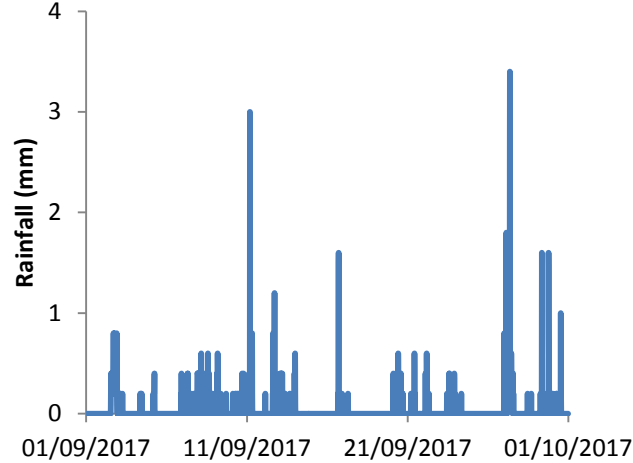
Month	Rainfall (mm)	Rainfall (Litres/Ha)	Flow (Litres/Ha)	% of Rainfall removed
March 2017	129.6	1,296,000	863,189	67 %
Sept. 2017	137.8	1,378,000	646,704	47 %

# Drainage system performance: Doonbeg

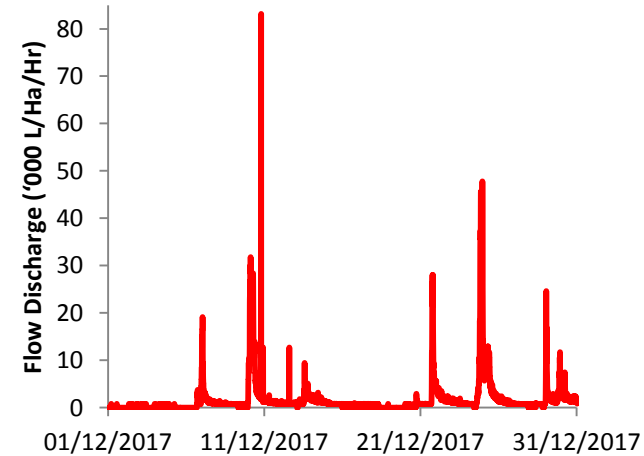
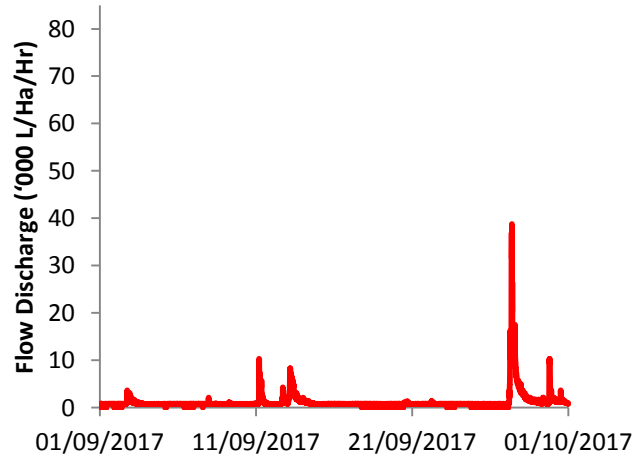
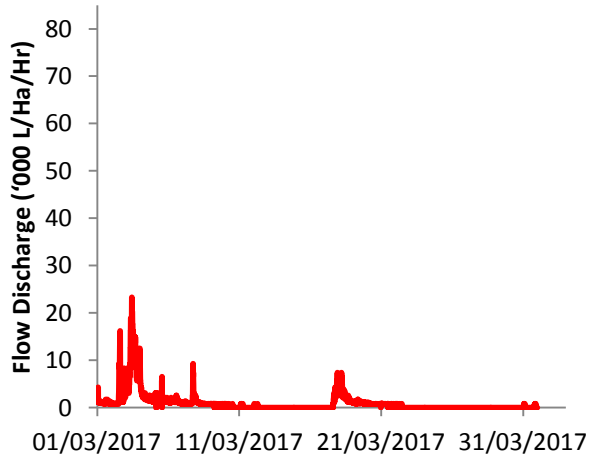
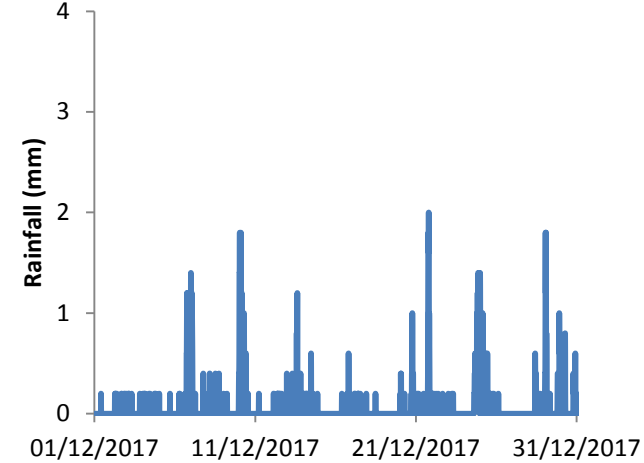
March 2017



Sept. 2017

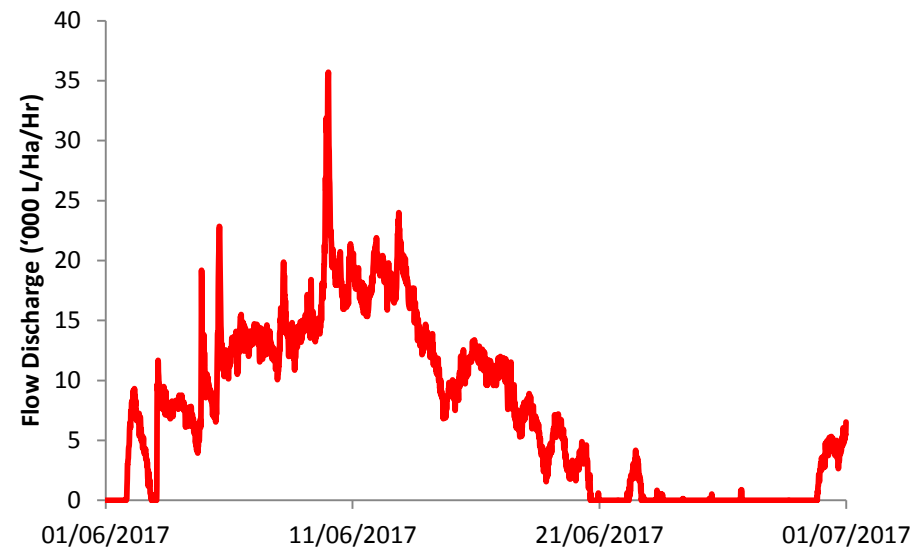
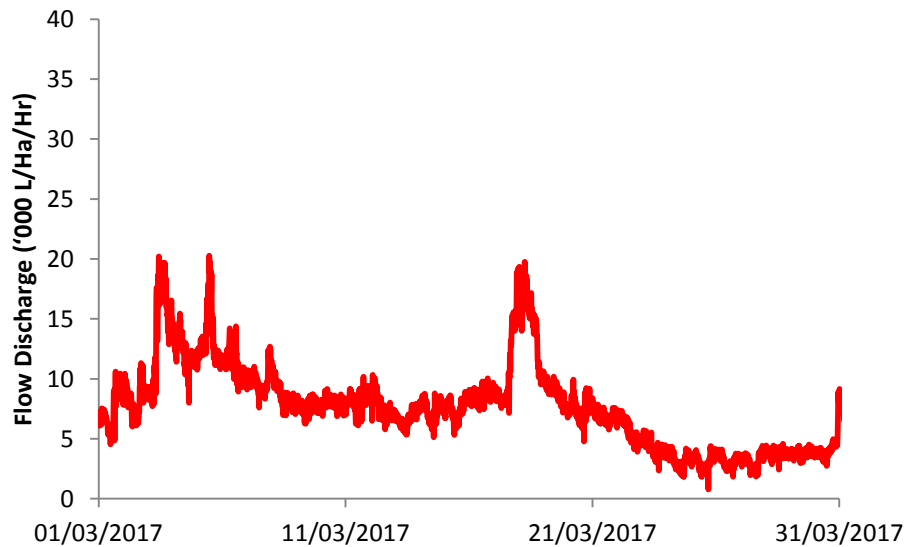
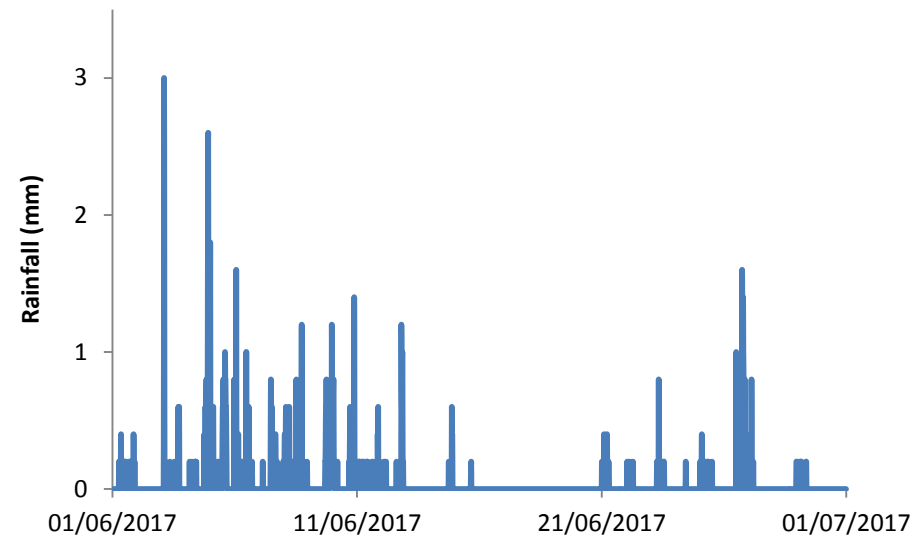
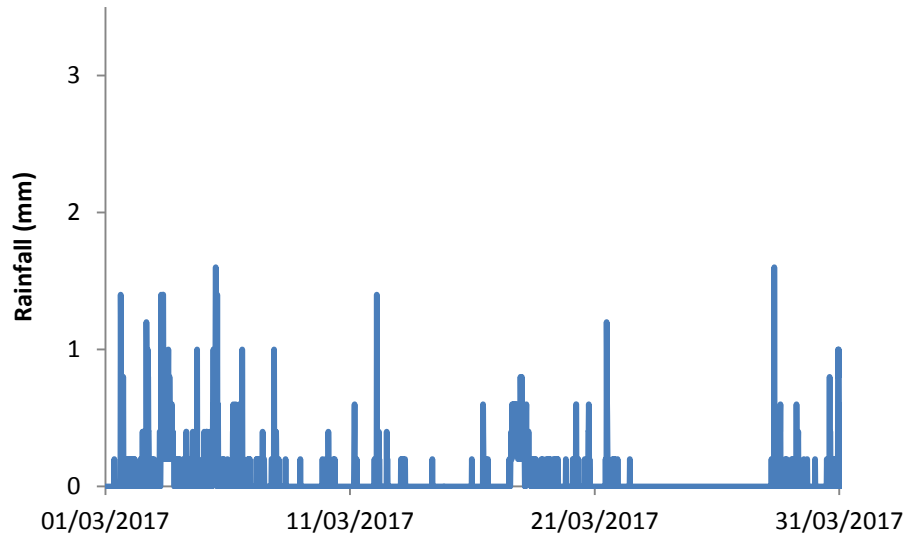


Dec. 2017



Month	Rainfall (mm)	Rainfall (Litres/Ha)	Flow (Litres/Ha)	% of Rainfall removed
March 2017	120.4	1,204,000	662,453	55%
Sept. 2017	109.4	1,094,000	839,255	77%
Dec. 2017	163.6	1,636,000	1,215,208	74%

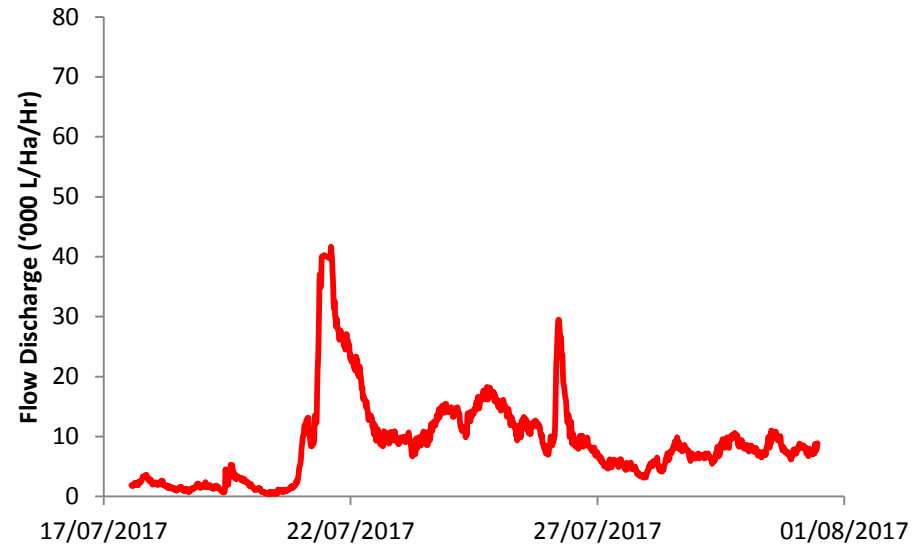
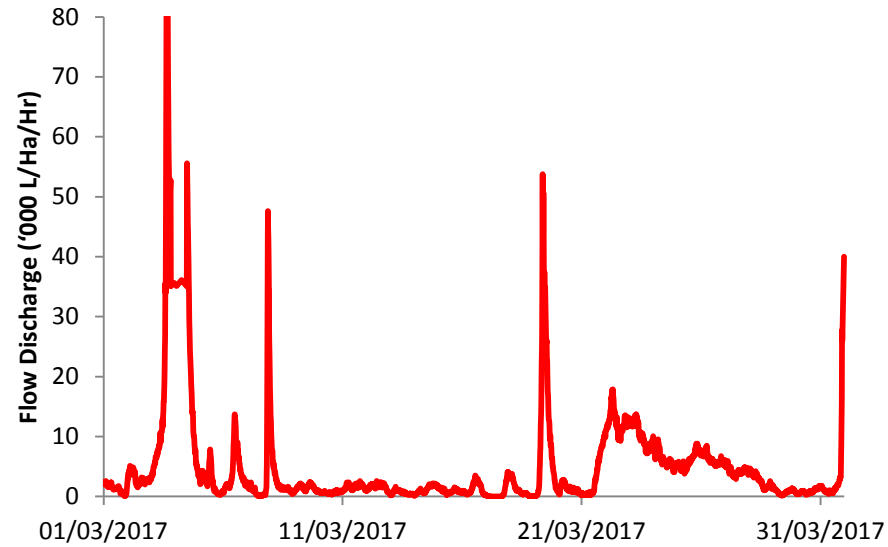
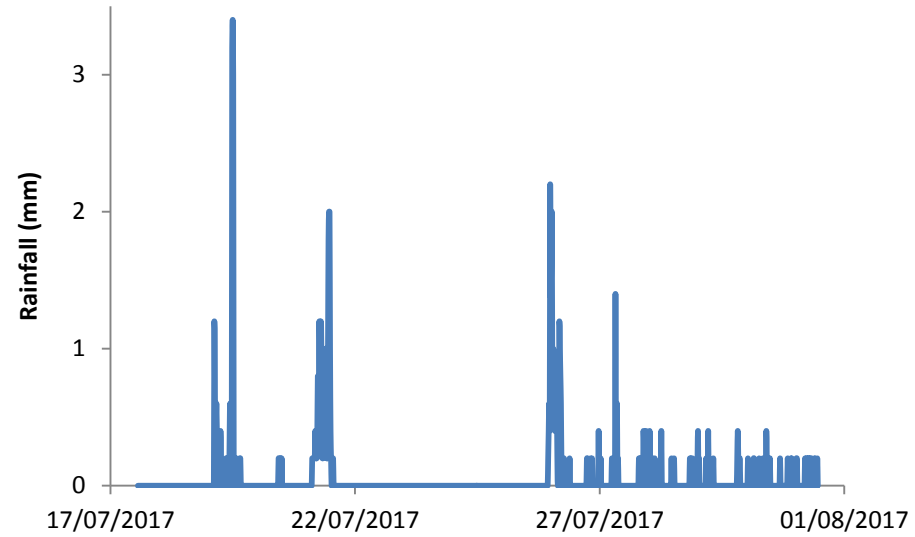
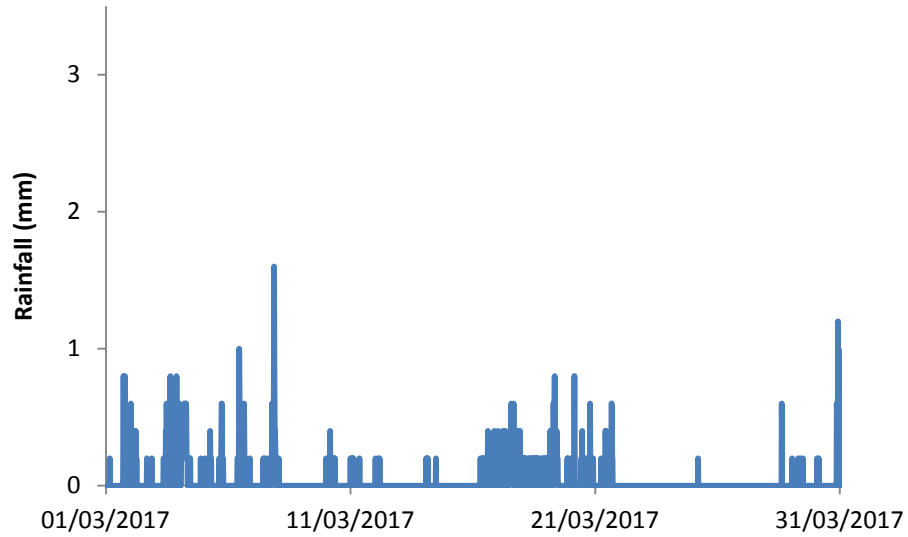
# Drainage system performance: Kishkeam



Month	Rainfall (mm)	Rainfall (Litres/Ha)	Flow (Litres/Ha)	% of Rainfall removed
March 2017	172.8	1,728,000	5,684,592	329 %
June 2017	126.0	1,260,000	5,284,412	419 %



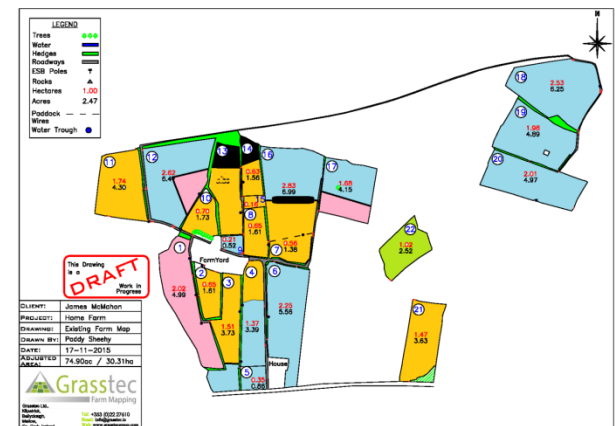
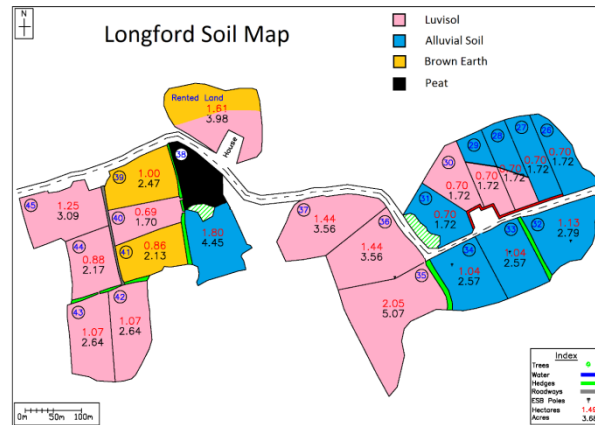
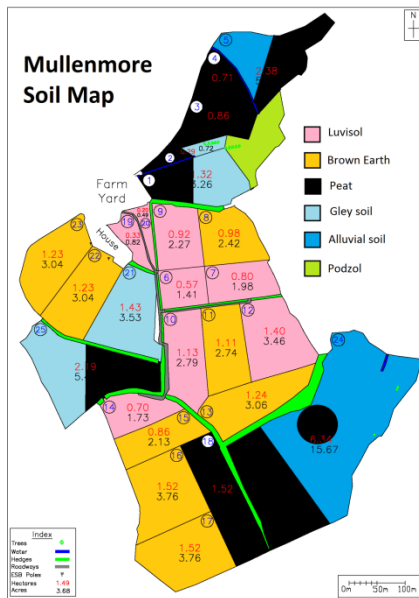
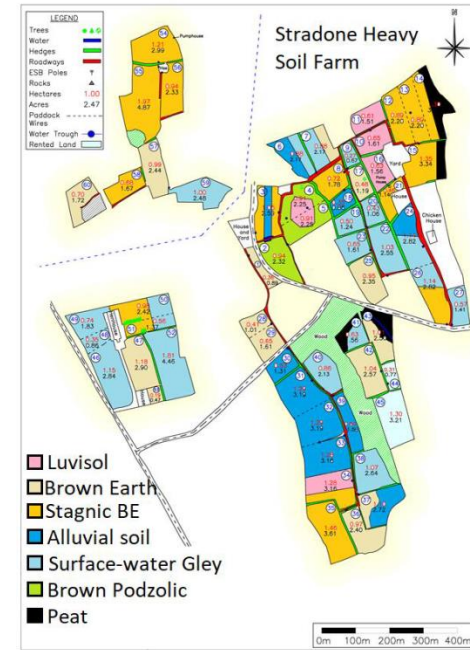
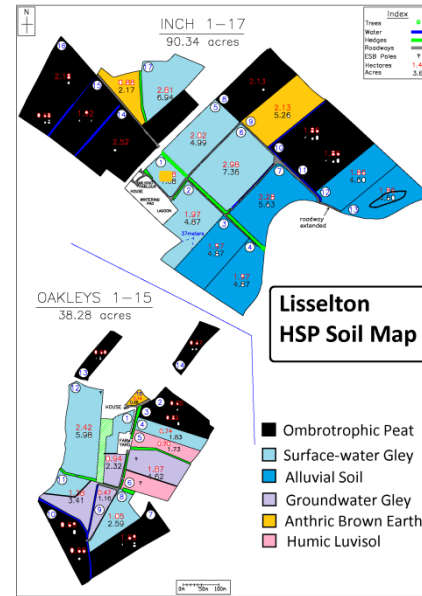
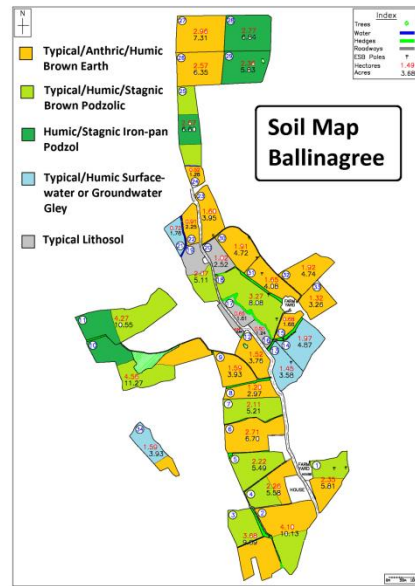
# Drainage system performance: Crossmolina



Month	Rainfall (mm)	Rainfall (Litres/Ha)	Flow (Litres/Ha)	% of Rainfall removed
March 2017	131.0	1,310,000	3,691,133	281 %
(Late) July 2017	79.8	798,000	3,032,182	379 %

# Soil Survey Reports and Maps

- Alan Wood
- Con Lehane
- David Brady
- Donal Keane
- James McMahon



**Thank you**