

UK Design Flood Estimation

Generated on 05 May 2021 08:30:27 by User

Printed from the ReFH2 Flood Modelling software package, version 3.1.7439.12207

Summary of estimate using the Flood Estimation Handbook revitalised flood hydrograph method (ReFH2)

Site details

Checksum: 1ACA-BF0A

Site name: FEH_Point_Descriptors_588788_217031

Easting: 588788

Northing: 217031

Country: England, Wales or Northern Ireland

Catchment Area (km²): 0.05

Using plot scale calculations: Yes

Model: ReFH2.3

Site description: None

Model run: 100 year 1.4 CC

Summary of results

Rainfall - FEH 2013 model (mm):	86.11	Total runoff (ML):	1.26
Total Rainfall (mm):	55.05	Total flow (ML):	2.81
Peak Rainfall (mm):	12.51	Peak flow (m ³ /s):	0.06

Parameters

Where the user has overridden a system-generated value, this original value is shown in square brackets after the value used.

* Indicates that the user locked the duration/timestep

Rainfall parameters (Rainfall - FEH 2013 model)

Name	Value	User-defined?
Duration (hh:mm:ss)	05:30:00	No
Timestep (hh:mm:ss)	00:30:00	No
SCF (Seasonal correction factor)	0.64	No
ARF (Areal reduction factor)	0.99	No
Seasonality	Winter	No
Climate change factor	1.40	Yes

Loss model parameters

Name	Value	User-defined?
Cini (mm)	119.46	No
Cmax (mm)	357.53	No
Use alpha correction factor	No	No
Alpha correction factor	n/a	No

Routing model parameters

Name	Value	User-defined?
Tp (hr)	3.25 [1.71]	Yes
Up	0.65	No
Uk	0.8	No

Baseflow model parameters

Name	Value	User-defined?
BFO (m ³ /s)	0	No
BL (hr)	38.89 [34.57]	Yes
BR	1.43	No

Urbanisation parameters

Name	Value	User-defined?
Urban area (km ²)	0 [0]	Yes
Urbext 2000	0.04 [0]	Yes
Impervious runoff factor	1 [0.7]	Yes
Imperviousness factor	1 [0.4]	Yes
Tp scaling factor	0.75	No
Depression storage depth (mm)	0.5	No
Exporting drained area (km ²)	0.00	Yes
Sewer capacity (m ³ /s)	0.00	Yes

Time series data

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
00:00:00	1.2085	0.0000	0.4554	0.0000	0.00147	0.00147
00:30:00	2.0248	0.0000	0.7716	0.0001	0.00145	0.00156
01:00:00	3.3746	0.0000	1.3098	0.0005	0.00144	0.00196
01:30:00	5.5798	0.0000	2.2314	0.0015	0.00143	0.00288
02:00:00	9.0806	0.0000	3.8060	0.0032	0.00145	0.00469
02:30:00	12.5089	0.0000	5.5973	0.0065	0.0015	0.008
03:00:00	9.0806	0.0000	4.3205	0.0120	0.0016	0.0136
03:30:00	5.5798	0.0000	2.7622	0.0197	0.00181	0.0215
04:00:00	3.3746	0.0000	1.7102	0.0286	0.00213	0.0308
04:30:00	2.0248	0.0000	1.0404	0.0378	0.00258	0.0404
05:00:00	1.2085	0.0000	0.6262	0.0463	0.00316	0.0494
05:30:00	0.0000	0.0000	0.0000	0.0530	0.00385	0.0568
06:00:00	0.0000	0.0000	0.0000	0.0568	0.00464	0.0614
06:30:00	0.0000	0.0000	0.0000	0.0570	0.00546	0.0624
07:00:00	0.0000	0.0000	0.0000	0.0544	0.00626	0.0606
07:30:00	0.0000	0.0000	0.0000	0.0501	0.00701	0.0571
08:00:00	0.0000	0.0000	0.0000	0.0449	0.00769	0.0526
08:30:00	0.0000	0.0000	0.0000	0.0395	0.00827	0.0477
09:00:00	0.0000	0.0000	0.0000	0.0341	0.00877	0.0428
09:30:00	0.0000	0.0000	0.0000	0.0293	0.00918	0.0385
10:00:00	0.0000	0.0000	0.0000	0.0252	0.00951	0.0347
10:30:00	0.0000	0.0000	0.0000	0.0216	0.00978	0.0313
11:00:00	0.0000	0.0000	0.0000	0.0183	0.01	0.0283
11:30:00	0.0000	0.0000	0.0000	0.0153	0.0102	0.0255
12:00:00	0.0000	0.0000	0.0000	0.0126	0.0103	0.0229
12:30:00	0.0000	0.0000	0.0000	0.0101	0.0104	0.0205
13:00:00	0.0000	0.0000	0.0000	0.0077	0.0104	0.0181
13:30:00	0.0000	0.0000	0.0000	0.0056	0.0104	0.0159
14:00:00	0.0000	0.0000	0.0000	0.0036	0.0103	0.014
14:30:00	0.0000	0.0000	0.0000	0.0021	0.0102	0.0124
15:00:00	0.0000	0.0000	0.0000	0.0011	0.0101	0.0113
15:30:00	0.0000	0.0000	0.0000	0.0005	0.01	0.0106
16:00:00	0.0000	0.0000	0.0000	0.0002	0.00991	0.0101
16:30:00	0.0000	0.0000	0.0000	0.0001	0.00978	0.00985
17:00:00	0.0000	0.0000	0.0000	0.0000	0.00966	0.00966

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
17:30:00	0.0000	0.0000	0.0000	0.0000	0.00954	0.00954
18:00:00	0.0000	0.0000	0.0000	0.0000	0.00941	0.00941
18:30:00	0.0000	0.0000	0.0000	0.0000	0.00929	0.00929
19:00:00	0.0000	0.0000	0.0000	0.0000	0.00918	0.00918
19:30:00	0.0000	0.0000	0.0000	0.0000	0.00906	0.00906
20:00:00	0.0000	0.0000	0.0000	0.0000	0.00894	0.00894
20:30:00	0.0000	0.0000	0.0000	0.0000	0.00883	0.00883
21:00:00	0.0000	0.0000	0.0000	0.0000	0.00872	0.00872
21:30:00	0.0000	0.0000	0.0000	0.0000	0.0086	0.0086
22:00:00	0.0000	0.0000	0.0000	0.0000	0.00849	0.00849
22:30:00	0.0000	0.0000	0.0000	0.0000	0.00839	0.00839
23:00:00	0.0000	0.0000	0.0000	0.0000	0.00828	0.00828
23:30:00	0.0000	0.0000	0.0000	0.0000	0.00817	0.00817
24:00:00	0.0000	0.0000	0.0000	0.0000	0.00807	0.00807
24:30:00	0.0000	0.0000	0.0000	0.0000	0.00797	0.00797
25:00:00	0.0000	0.0000	0.0000	0.0000	0.00786	0.00786
25:30:00	0.0000	0.0000	0.0000	0.0000	0.00776	0.00776
26:00:00	0.0000	0.0000	0.0000	0.0000	0.00766	0.00766
26:30:00	0.0000	0.0000	0.0000	0.0000	0.00757	0.00757
27:00:00	0.0000	0.0000	0.0000	0.0000	0.00747	0.00747
27:30:00	0.0000	0.0000	0.0000	0.0000	0.00737	0.00737
28:00:00	0.0000	0.0000	0.0000	0.0000	0.00728	0.00728
28:30:00	0.0000	0.0000	0.0000	0.0000	0.00719	0.00719
29:00:00	0.0000	0.0000	0.0000	0.0000	0.0071	0.0071
29:30:00	0.0000	0.0000	0.0000	0.0000	0.007	0.007
30:00:00	0.0000	0.0000	0.0000	0.0000	0.00691	0.00691
30:30:00	0.0000	0.0000	0.0000	0.0000	0.00683	0.00683
31:00:00	0.0000	0.0000	0.0000	0.0000	0.00674	0.00674
31:30:00	0.0000	0.0000	0.0000	0.0000	0.00665	0.00665
32:00:00	0.0000	0.0000	0.0000	0.0000	0.00657	0.00657
32:30:00	0.0000	0.0000	0.0000	0.0000	0.00648	0.00648
33:00:00	0.0000	0.0000	0.0000	0.0000	0.0064	0.0064
33:30:00	0.0000	0.0000	0.0000	0.0000	0.00632	0.00632
34:00:00	0.0000	0.0000	0.0000	0.0000	0.00624	0.00624
34:30:00	0.0000	0.0000	0.0000	0.0000	0.00616	0.00616
35:00:00	0.0000	0.0000	0.0000	0.0000	0.00608	0.00608

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
35:30:00	0.0000	0.0000	0.0000	0.0000	0.006	0.006
36:00:00	0.0000	0.0000	0.0000	0.0000	0.00593	0.00593
36:30:00	0.0000	0.0000	0.0000	0.0000	0.00585	0.00585
37:00:00	0.0000	0.0000	0.0000	0.0000	0.00578	0.00578
37:30:00	0.0000	0.0000	0.0000	0.0000	0.0057	0.0057
38:00:00	0.0000	0.0000	0.0000	0.0000	0.00563	0.00563
38:30:00	0.0000	0.0000	0.0000	0.0000	0.00556	0.00556
39:00:00	0.0000	0.0000	0.0000	0.0000	0.00549	0.00549
39:30:00	0.0000	0.0000	0.0000	0.0000	0.00542	0.00542
40:00:00	0.0000	0.0000	0.0000	0.0000	0.00535	0.00535
40:30:00	0.0000	0.0000	0.0000	0.0000	0.00528	0.00528
41:00:00	0.0000	0.0000	0.0000	0.0000	0.00521	0.00521
41:30:00	0.0000	0.0000	0.0000	0.0000	0.00514	0.00514
42:00:00	0.0000	0.0000	0.0000	0.0000	0.00508	0.00508
42:30:00	0.0000	0.0000	0.0000	0.0000	0.00501	0.00501
43:00:00	0.0000	0.0000	0.0000	0.0000	0.00495	0.00495
43:30:00	0.0000	0.0000	0.0000	0.0000	0.00489	0.00489
44:00:00	0.0000	0.0000	0.0000	0.0000	0.00482	0.00482
44:30:00	0.0000	0.0000	0.0000	0.0000	0.00476	0.00476
45:00:00	0.0000	0.0000	0.0000	0.0000	0.0047	0.0047
45:30:00	0.0000	0.0000	0.0000	0.0000	0.00464	0.00464
46:00:00	0.0000	0.0000	0.0000	0.0000	0.00458	0.00458
46:30:00	0.0000	0.0000	0.0000	0.0000	0.00452	0.00452
47:00:00	0.0000	0.0000	0.0000	0.0000	0.00447	0.00447
47:30:00	0.0000	0.0000	0.0000	0.0000	0.00441	0.00441
48:00:00	0.0000	0.0000	0.0000	0.0000	0.00435	0.00435
48:30:00	0.0000	0.0000	0.0000	0.0000	0.0043	0.0043
49:00:00	0.0000	0.0000	0.0000	0.0000	0.00424	0.00424
49:30:00	0.0000	0.0000	0.0000	0.0000	0.00419	0.00419
50:00:00	0.0000	0.0000	0.0000	0.0000	0.00413	0.00413
50:30:00	0.0000	0.0000	0.0000	0.0000	0.00408	0.00408
51:00:00	0.0000	0.0000	0.0000	0.0000	0.00403	0.00403
51:30:00	0.0000	0.0000	0.0000	0.0000	0.00398	0.00398
52:00:00	0.0000	0.0000	0.0000	0.0000	0.00393	0.00393
52:30:00	0.0000	0.0000	0.0000	0.0000	0.00388	0.00388
53:00:00	0.0000	0.0000	0.0000	0.0000	0.00383	0.00383

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
53:30:00	0.0000	0.0000	0.0000	0.0000	0.00378	0.00378
54:00:00	0.0000	0.0000	0.0000	0.0000	0.00373	0.00373
54:30:00	0.0000	0.0000	0.0000	0.0000	0.00368	0.00368
55:00:00	0.0000	0.0000	0.0000	0.0000	0.00364	0.00364
55:30:00	0.0000	0.0000	0.0000	0.0000	0.00359	0.00359
56:00:00	0.0000	0.0000	0.0000	0.0000	0.00354	0.00354
56:30:00	0.0000	0.0000	0.0000	0.0000	0.0035	0.0035
57:00:00	0.0000	0.0000	0.0000	0.0000	0.00345	0.00345
57:30:00	0.0000	0.0000	0.0000	0.0000	0.00341	0.00341
58:00:00	0.0000	0.0000	0.0000	0.0000	0.00337	0.00337
58:30:00	0.0000	0.0000	0.0000	0.0000	0.00332	0.00332
59:00:00	0.0000	0.0000	0.0000	0.0000	0.00328	0.00328
59:30:00	0.0000	0.0000	0.0000	0.0000	0.00324	0.00324
60:00:00	0.0000	0.0000	0.0000	0.0000	0.0032	0.0032
60:30:00	0.0000	0.0000	0.0000	0.0000	0.00316	0.00316
61:00:00	0.0000	0.0000	0.0000	0.0000	0.00312	0.00312
61:30:00	0.0000	0.0000	0.0000	0.0000	0.00308	0.00308
62:00:00	0.0000	0.0000	0.0000	0.0000	0.00304	0.00304
62:30:00	0.0000	0.0000	0.0000	0.0000	0.003	0.003
63:00:00	0.0000	0.0000	0.0000	0.0000	0.00296	0.00296
63:30:00	0.0000	0.0000	0.0000	0.0000	0.00292	0.00292
64:00:00	0.0000	0.0000	0.0000	0.0000	0.00288	0.00288
64:30:00	0.0000	0.0000	0.0000	0.0000	0.00285	0.00285
65:00:00	0.0000	0.0000	0.0000	0.0000	0.00281	0.00281
65:30:00	0.0000	0.0000	0.0000	0.0000	0.00278	0.00278
66:00:00	0.0000	0.0000	0.0000	0.0000	0.00274	0.00274
66:30:00	0.0000	0.0000	0.0000	0.0000	0.0027	0.0027
67:00:00	0.0000	0.0000	0.0000	0.0000	0.00267	0.00267
67:30:00	0.0000	0.0000	0.0000	0.0000	0.00264	0.00264
68:00:00	0.0000	0.0000	0.0000	0.0000	0.0026	0.0026
68:30:00	0.0000	0.0000	0.0000	0.0000	0.00257	0.00257
69:00:00	0.0000	0.0000	0.0000	0.0000	0.00254	0.00254
69:30:00	0.0000	0.0000	0.0000	0.0000	0.0025	0.0025
70:00:00	0.0000	0.0000	0.0000	0.0000	0.00247	0.00247
70:30:00	0.0000	0.0000	0.0000	0.0000	0.00244	0.00244
71:00:00	0.0000	0.0000	0.0000	0.0000	0.00241	0.00241

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
71:30:00	0.0000	0.0000	0.0000	0.0000	0.00238	0.00238
72:00:00	0.0000	0.0000	0.0000	0.0000	0.00235	0.00235
72:30:00	0.0000	0.0000	0.0000	0.0000	0.00232	0.00232
73:00:00	0.0000	0.0000	0.0000	0.0000	0.00229	0.00229
73:30:00	0.0000	0.0000	0.0000	0.0000	0.00226	0.00226
74:00:00	0.0000	0.0000	0.0000	0.0000	0.00223	0.00223
74:30:00	0.0000	0.0000	0.0000	0.0000	0.0022	0.0022
75:00:00	0.0000	0.0000	0.0000	0.0000	0.00217	0.00217
75:30:00	0.0000	0.0000	0.0000	0.0000	0.00215	0.00215
76:00:00	0.0000	0.0000	0.0000	0.0000	0.00212	0.00212
76:30:00	0.0000	0.0000	0.0000	0.0000	0.00209	0.00209
77:00:00	0.0000	0.0000	0.0000	0.0000	0.00206	0.00206
77:30:00	0.0000	0.0000	0.0000	0.0000	0.00204	0.00204
78:00:00	0.0000	0.0000	0.0000	0.0000	0.00201	0.00201
78:30:00	0.0000	0.0000	0.0000	0.0000	0.00199	0.00199
79:00:00	0.0000	0.0000	0.0000	0.0000	0.00196	0.00196
79:30:00	0.0000	0.0000	0.0000	0.0000	0.00194	0.00194
80:00:00	0.0000	0.0000	0.0000	0.0000	0.00191	0.00191
80:30:00	0.0000	0.0000	0.0000	0.0000	0.00189	0.00189
81:00:00	0.0000	0.0000	0.0000	0.0000	0.00186	0.00186
81:30:00	0.0000	0.0000	0.0000	0.0000	0.00184	0.00184
82:00:00	0.0000	0.0000	0.0000	0.0000	0.00182	0.00182
82:30:00	0.0000	0.0000	0.0000	0.0000	0.00179	0.00179
83:00:00	0.0000	0.0000	0.0000	0.0000	0.00177	0.00177
83:30:00	0.0000	0.0000	0.0000	0.0000	0.00175	0.00175
84:00:00	0.0000	0.0000	0.0000	0.0000	0.00172	0.00172
84:30:00	0.0000	0.0000	0.0000	0.0000	0.0017	0.0017
85:00:00	0.0000	0.0000	0.0000	0.0000	0.00168	0.00168
85:30:00	0.0000	0.0000	0.0000	0.0000	0.00166	0.00166
86:00:00	0.0000	0.0000	0.0000	0.0000	0.00164	0.00164
86:30:00	0.0000	0.0000	0.0000	0.0000	0.00162	0.00162
87:00:00	0.0000	0.0000	0.0000	0.0000	0.0016	0.0016
87:30:00	0.0000	0.0000	0.0000	0.0000	0.00158	0.00158
88:00:00	0.0000	0.0000	0.0000	0.0000	0.00156	0.00156
88:30:00	0.0000	0.0000	0.0000	0.0000	0.00154	0.00154
89:00:00	0.0000	0.0000	0.0000	0.0000	0.00152	0.00152

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
89:30:00	0.0000	0.0000	0.0000	0.0000	0.0015	0.0015
90:00:00	0.0000	0.0000	0.0000	0.0000	0.00148	0.00148

Appendix

Catchment descriptors *

Name	Value	User-defined value used?
BFIHOST	0.38	No
BFIHOST19	0.42	No
PROPWET (mm)	0.23	No
SAAR (mm)	569	No

Values in square brackets are the original values loaded from the FEH Web Service or FEH CD-ROM