

UK Design Flood Estimation

Generated on 05 May 2021 08:47:59 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: C338-6498

Site name: FEH_Point_Descriptors_588788_217031

Easting: 588788

Northing: 217031

Country: England, Wales or Northern Ireland

Catchment Area (km²): 0.02

Using plot scale calculations: Yes

Model: ReFH2.3

Site description: None

Model run: 100 year

Summary of results

Rainfall - FEH 2013 model (mm):	61.50	Total runoff (ML):	0.33
Total Rainfall (mm):	39.40	Total flow (ML):	0.84
Peak Rainfall (mm):	8.95	Peak flow (m ³ /s):	0.02

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

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 [1.34]	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 [32.37]	Yes
BR	1.57	No

Urbanisation parameters

Name	Value	User-defined?
Urban area (km ²)	0	No
Urbext 2000	0	No
Impervious runoff factor	0.7	No
Imperviousness factor	0.4	No
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	0.8649	0.0000	0.2900	0.0000	0.000658	0.000658
00:30:00	1.4491	0.0000	0.4906	0.0000	0.000649	0.000676
01:00:00	2.4151	0.0000	0.8307	0.0001	0.000643	0.000767
01:30:00	3.9934	0.0000	1.4094	0.0003	0.000639	0.000983
02:00:00	6.4989	0.0000	2.3891	0.0008	0.000642	0.00141
02:30:00	8.9525	0.0000	3.4845	0.0015	0.000657	0.0022
03:00:00	6.4989	0.0000	2.6699	0.0028	0.000693	0.00354
03:30:00	3.9934	0.0000	1.6992	0.0047	0.00076	0.00547
04:00:00	2.4151	0.0000	1.0493	0.0069	0.000866	0.00776
04:30:00	1.4491	0.0000	0.6374	0.0092	0.00102	0.0102
05:00:00	0.8649	0.0000	0.3833	0.0114	0.00121	0.0126
05:30:00	0.0000	0.0000	0.0000	0.0132	0.00144	0.0147
06:00:00	0.0000	0.0000	0.0000	0.0144	0.0017	0.0161
06:30:00	0.0000	0.0000	0.0000	0.0147	0.00197	0.0167
07:00:00	0.0000	0.0000	0.0000	0.0142	0.00223	0.0164
07:30:00	0.0000	0.0000	0.0000	0.0132	0.00248	0.0157
08:00:00	0.0000	0.0000	0.0000	0.0119	0.0027	0.0146
08:30:00	0.0000	0.0000	0.0000	0.0106	0.00289	0.0134
09:00:00	0.0000	0.0000	0.0000	0.0092	0.00305	0.0122
09:30:00	0.0000	0.0000	0.0000	0.0080	0.00319	0.0111
10:00:00	0.0000	0.0000	0.0000	0.0069	0.00329	0.0102
10:30:00	0.0000	0.0000	0.0000	0.0060	0.00338	0.0094
11:00:00	0.0000	0.0000	0.0000	0.0052	0.00345	0.00865
11:30:00	0.0000	0.0000	0.0000	0.0044	0.0035	0.00793
12:00:00	0.0000	0.0000	0.0000	0.0037	0.00354	0.00723
12:30:00	0.0000	0.0000	0.0000	0.0030	0.00356	0.00654
13:00:00	0.0000	0.0000	0.0000	0.0023	0.00357	0.00586
13:30:00	0.0000	0.0000	0.0000	0.0016	0.00356	0.00521
14:00:00	0.0000	0.0000	0.0000	0.0011	0.00354	0.00462
14:30:00	0.0000	0.0000	0.0000	0.0006	0.00352	0.00414
15:00:00	0.0000	0.0000	0.0000	0.0003	0.00348	0.00381
15:30:00	0.0000	0.0000	0.0000	0.0002	0.00344	0.0036
16:00:00	0.0000	0.0000	0.0000	0.0001	0.0034	0.00346
16:30:00	0.0000	0.0000	0.0000	0.0000	0.00336	0.00337
17:00:00	0.0000	0.0000	0.0000	0.0000	0.00331	0.00332

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	0.00327	0.00327
18:00:00	0.0000	0.0000	0.0000	0.0000	0.00323	0.00323
18:30:00	0.0000	0.0000	0.0000	0.0000	0.00319	0.00319
19:00:00	0.0000	0.0000	0.0000	0.0000	0.00315	0.00315
19:30:00	0.0000	0.0000	0.0000	0.0000	0.00311	0.00311
20:00:00	0.0000	0.0000	0.0000	0.0000	0.00307	0.00307
20:30:00	0.0000	0.0000	0.0000	0.0000	0.00303	0.00303
21:00:00	0.0000	0.0000	0.0000	0.0000	0.00299	0.00299
21:30:00	0.0000	0.0000	0.0000	0.0000	0.00295	0.00295
22:00:00	0.0000	0.0000	0.0000	0.0000	0.00291	0.00291
22:30:00	0.0000	0.0000	0.0000	0.0000	0.00288	0.00288
23:00:00	0.0000	0.0000	0.0000	0.0000	0.00284	0.00284
23:30:00	0.0000	0.0000	0.0000	0.0000	0.0028	0.0028
24:00:00	0.0000	0.0000	0.0000	0.0000	0.00277	0.00277
24:30:00	0.0000	0.0000	0.0000	0.0000	0.00273	0.00273
25:00:00	0.0000	0.0000	0.0000	0.0000	0.0027	0.0027
25:30:00	0.0000	0.0000	0.0000	0.0000	0.00266	0.00266
26:00:00	0.0000	0.0000	0.0000	0.0000	0.00263	0.00263
26:30:00	0.0000	0.0000	0.0000	0.0000	0.0026	0.0026
27:00:00	0.0000	0.0000	0.0000	0.0000	0.00256	0.00256
27:30:00	0.0000	0.0000	0.0000	0.0000	0.00253	0.00253
28:00:00	0.0000	0.0000	0.0000	0.0000	0.0025	0.0025
28:30:00	0.0000	0.0000	0.0000	0.0000	0.00247	0.00247
29:00:00	0.0000	0.0000	0.0000	0.0000	0.00243	0.00243
29:30:00	0.0000	0.0000	0.0000	0.0000	0.0024	0.0024
30:00:00	0.0000	0.0000	0.0000	0.0000	0.00237	0.00237
30:30:00	0.0000	0.0000	0.0000	0.0000	0.00234	0.00234
31:00:00	0.0000	0.0000	0.0000	0.0000	0.00231	0.00231
31:30:00	0.0000	0.0000	0.0000	0.0000	0.00228	0.00228
32:00:00	0.0000	0.0000	0.0000	0.0000	0.00225	0.00225
32:30:00	0.0000	0.0000	0.0000	0.0000	0.00222	0.00222
33:00:00	0.0000	0.0000	0.0000	0.0000	0.0022	0.0022
33:30:00	0.0000	0.0000	0.0000	0.0000	0.00217	0.00217
34:00:00	0.0000	0.0000	0.0000	0.0000	0.00214	0.00214
34:30:00	0.0000	0.0000	0.0000	0.0000	0.00211	0.00211
35:00:00	0.0000	0.0000	0.0000	0.0000	0.00209	0.00209

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	0.00206	0.00206
36:00:00	0.0000	0.0000	0.0000	0.0000	0.00203	0.00203
36:30:00	0.0000	0.0000	0.0000	0.0000	0.00201	0.00201
37:00:00	0.0000	0.0000	0.0000	0.0000	0.00198	0.00198
37:30:00	0.0000	0.0000	0.0000	0.0000	0.00196	0.00196
38:00:00	0.0000	0.0000	0.0000	0.0000	0.00193	0.00193
38:30:00	0.0000	0.0000	0.0000	0.0000	0.00191	0.00191
39:00:00	0.0000	0.0000	0.0000	0.0000	0.00188	0.00188
39:30:00	0.0000	0.0000	0.0000	0.0000	0.00186	0.00186
40:00:00	0.0000	0.0000	0.0000	0.0000	0.00183	0.00183
40:30:00	0.0000	0.0000	0.0000	0.0000	0.00181	0.00181
41:00:00	0.0000	0.0000	0.0000	0.0000	0.00179	0.00179
41:30:00	0.0000	0.0000	0.0000	0.0000	0.00176	0.00176
42:00:00	0.0000	0.0000	0.0000	0.0000	0.00174	0.00174
42:30:00	0.0000	0.0000	0.0000	0.0000	0.00172	0.00172
43:00:00	0.0000	0.0000	0.0000	0.0000	0.0017	0.0017
43:30:00	0.0000	0.0000	0.0000	0.0000	0.00168	0.00168
44:00:00	0.0000	0.0000	0.0000	0.0000	0.00166	0.00166
44:30:00	0.0000	0.0000	0.0000	0.0000	0.00163	0.00163
45:00:00	0.0000	0.0000	0.0000	0.0000	0.00161	0.00161
45:30:00	0.0000	0.0000	0.0000	0.0000	0.00159	0.00159
46:00:00	0.0000	0.0000	0.0000	0.0000	0.00157	0.00157
46:30:00	0.0000	0.0000	0.0000	0.0000	0.00155	0.00155
47:00:00	0.0000	0.0000	0.0000	0.0000	0.00153	0.00153
47:30:00	0.0000	0.0000	0.0000	0.0000	0.00151	0.00151
48:00:00	0.0000	0.0000	0.0000	0.0000	0.00149	0.00149
48:30:00	0.0000	0.0000	0.0000	0.0000	0.00147	0.00147
49:00:00	0.0000	0.0000	0.0000	0.0000	0.00146	0.00146
49:30:00	0.0000	0.0000	0.0000	0.0000	0.00144	0.00144
50:00:00	0.0000	0.0000	0.0000	0.0000	0.00142	0.00142
50:30:00	0.0000	0.0000	0.0000	0.0000	0.0014	0.0014
51:00:00	0.0000	0.0000	0.0000	0.0000	0.00138	0.00138
51:30:00	0.0000	0.0000	0.0000	0.0000	0.00136	0.00136
52:00:00	0.0000	0.0000	0.0000	0.0000	0.00135	0.00135
52:30:00	0.0000	0.0000	0.0000	0.0000	0.00133	0.00133
53:00:00	0.0000	0.0000	0.0000	0.0000	0.00131	0.00131

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	0.0013	0.0013
54:00:00	0.0000	0.0000	0.0000	0.0000	0.00128	0.00128
54:30:00	0.0000	0.0000	0.0000	0.0000	0.00126	0.00126
55:00:00	0.0000	0.0000	0.0000	0.0000	0.00125	0.00125
55:30:00	0.0000	0.0000	0.0000	0.0000	0.00123	0.00123
56:00:00	0.0000	0.0000	0.0000	0.0000	0.00122	0.00122
56:30:00	0.0000	0.0000	0.0000	0.0000	0.0012	0.0012
57:00:00	0.0000	0.0000	0.0000	0.0000	0.00118	0.00118
57:30:00	0.0000	0.0000	0.0000	0.0000	0.00117	0.00117
58:00:00	0.0000	0.0000	0.0000	0.0000	0.00115	0.00115
58:30:00	0.0000	0.0000	0.0000	0.0000	0.00114	0.00114
59:00:00	0.0000	0.0000	0.0000	0.0000	0.00113	0.00113
59:30:00	0.0000	0.0000	0.0000	0.0000	0.00111	0.00111
60:00:00	0.0000	0.0000	0.0000	0.0000	0.0011	0.0011
60:30:00	0.0000	0.0000	0.0000	0.0000	0.00108	0.00108
61:00:00	0.0000	0.0000	0.0000	0.0000	0.00107	0.00107
61:30:00	0.0000	0.0000	0.0000	0.0000	0.00106	0.00106
62:00:00	0.0000	0.0000	0.0000	0.0000	0.00104	0.00104
62:30:00	0.0000	0.0000	0.0000	0.0000	0.00103	0.00103
63:00:00	0.0000	0.0000	0.0000	0.0000	0.00102	0.00102
63:30:00	0.0000	0.0000	0.0000	0.0000	0.001	0.001
64:00:00	0.0000	0.0000	0.0000	0.0000	0.00099	0.00099
64:30:00	0.0000	0.0000	0.0000	0.0000	0.000977	0.000977
65:00:00	0.0000	0.0000	0.0000	0.0000	0.000964	0.000964
65:30:00	0.0000	0.0000	0.0000	0.0000	0.000952	0.000952
66:00:00	0.0000	0.0000	0.0000	0.0000	0.00094	0.00094
66:30:00	0.0000	0.0000	0.0000	0.0000	0.000928	0.000928
67:00:00	0.0000	0.0000	0.0000	0.0000	0.000916	0.000916
67:30:00	0.0000	0.0000	0.0000	0.0000	0.000904	0.000904
68:00:00	0.0000	0.0000	0.0000	0.0000	0.000893	0.000893
68:30:00	0.0000	0.0000	0.0000	0.0000	0.000881	0.000881
69:00:00	0.0000	0.0000	0.0000	0.0000	0.00087	0.00087
69:30:00	0.0000	0.0000	0.0000	0.0000	0.000859	0.000859
70:00:00	0.0000	0.0000	0.0000	0.0000	0.000848	0.000848
70:30:00	0.0000	0.0000	0.0000	0.0000	0.000837	0.000837
71:00:00	0.0000	0.0000	0.0000	0.0000	0.000827	0.000827

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	0.000816	0.000816
72:00:00	0.0000	0.0000	0.0000	0.0000	0.000806	0.000806
72:30:00	0.0000	0.0000	0.0000	0.0000	0.000795	0.000795
73:00:00	0.0000	0.0000	0.0000	0.0000	0.000785	0.000785
73:30:00	0.0000	0.0000	0.0000	0.0000	0.000775	0.000775
74:00:00	0.0000	0.0000	0.0000	0.0000	0.000765	0.000765
74:30:00	0.0000	0.0000	0.0000	0.0000	0.000755	0.000755
75:00:00	0.0000	0.0000	0.0000	0.0000	0.000746	0.000746
75:30:00	0.0000	0.0000	0.0000	0.0000	0.000736	0.000736
76:00:00	0.0000	0.0000	0.0000	0.0000	0.000727	0.000727
76:30:00	0.0000	0.0000	0.0000	0.0000	0.000717	0.000717
77:00:00	0.0000	0.0000	0.0000	0.0000	0.000708	0.000708
77:30:00	0.0000	0.0000	0.0000	0.0000	0.000699	0.000699
78:00:00	0.0000	0.0000	0.0000	0.0000	0.00069	0.00069
78:30:00	0.0000	0.0000	0.0000	0.0000	0.000682	0.000682
79:00:00	0.0000	0.0000	0.0000	0.0000	0.000673	0.000673
79:30:00	0.0000	0.0000	0.0000	0.0000	0.000664	0.000664

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