

UK Design Flood Estimation

Generated on 05 May 2021 08:51:45 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 1.4 CC

Summary of results

Rainfall - FEH 2013 model (mm):	86.11	Total runoff (ML):	0.49
Total Rainfall (mm):	55.15	Total flow (ML):	1.18
Peak Rainfall (mm):	12.53	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
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 [1.34]	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	1.43	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	1.2109	0.0000	0.4067	0.0000	0.000658	0.000658
00:30:00	2.0287	0.0000	0.6905	0.0000	0.00065	0.000687
01:00:00	3.3812	0.0000	1.1764	0.0002	0.000643	0.000818
01:30:00	5.5908	0.0000	2.0153	0.0005	0.000641	0.00112
02:00:00	9.0985	0.0000	3.4666	0.0011	0.000647	0.00173
02:30:00	12.5336	0.0000	5.1545	0.0022	0.000669	0.00286
03:00:00	9.0985	0.0000	4.0171	0.0041	0.000718	0.0048
03:30:00	5.5908	0.0000	2.5832	0.0068	0.000808	0.00761
04:00:00	3.3812	0.0000	1.6047	0.0100	0.000951	0.011
04:30:00	2.0287	0.0000	0.9782	0.0134	0.00115	0.0145
05:00:00	1.2109	0.0000	0.5894	0.0167	0.00141	0.0181
05:30:00	0.0000	0.0000	0.0000	0.0195	0.00173	0.0212
06:00:00	0.0000	0.0000	0.0000	0.0213	0.00208	0.0234
06:30:00	0.0000	0.0000	0.0000	0.0218	0.00244	0.0242
07:00:00	0.0000	0.0000	0.0000	0.0211	0.0028	0.0239
07:30:00	0.0000	0.0000	0.0000	0.0196	0.00314	0.0228
08:00:00	0.0000	0.0000	0.0000	0.0178	0.00344	0.0212
08:30:00	0.0000	0.0000	0.0000	0.0157	0.0037	0.0194
09:00:00	0.0000	0.0000	0.0000	0.0137	0.00393	0.0176
09:30:00	0.0000	0.0000	0.0000	0.0119	0.00411	0.016
10:00:00	0.0000	0.0000	0.0000	0.0103	0.00426	0.0146
10:30:00	0.0000	0.0000	0.0000	0.0090	0.00438	0.0134
11:00:00	0.0000	0.0000	0.0000	0.0078	0.00448	0.0122
11:30:00	0.0000	0.0000	0.0000	0.0066	0.00455	0.0112
12:00:00	0.0000	0.0000	0.0000	0.0055	0.00461	0.0101
12:30:00	0.0000	0.0000	0.0000	0.0045	0.00464	0.0091
13:00:00	0.0000	0.0000	0.0000	0.0034	0.00465	0.00809
13:30:00	0.0000	0.0000	0.0000	0.0025	0.00465	0.00713
14:00:00	0.0000	0.0000	0.0000	0.0016	0.00462	0.00626
14:30:00	0.0000	0.0000	0.0000	0.0010	0.00459	0.00554
15:00:00	0.0000	0.0000	0.0000	0.0005	0.00454	0.00505
15:30:00	0.0000	0.0000	0.0000	0.0002	0.00449	0.00474
16:00:00	0.0000	0.0000	0.0000	0.0001	0.00444	0.00454
16:30:00	0.0000	0.0000	0.0000	0.0000	0.00438	0.00441
17:00:00	0.0000	0.0000	0.0000	0.0000	0.00433	0.00433

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	0.00427	0.00427
18:00:00	0.0000	0.0000	0.0000	0.0000	0.00422	0.00422
18:30:00	0.0000	0.0000	0.0000	0.0000	0.00416	0.00416
19:00:00	0.0000	0.0000	0.0000	0.0000	0.00411	0.00411
19:30:00	0.0000	0.0000	0.0000	0.0000	0.00406	0.00406
20:00:00	0.0000	0.0000	0.0000	0.0000	0.00401	0.00401
20:30:00	0.0000	0.0000	0.0000	0.0000	0.00395	0.00395
21:00:00	0.0000	0.0000	0.0000	0.0000	0.0039	0.0039
21:30:00	0.0000	0.0000	0.0000	0.0000	0.00385	0.00385
22:00:00	0.0000	0.0000	0.0000	0.0000	0.0038	0.0038
22:30:00	0.0000	0.0000	0.0000	0.0000	0.00376	0.00376
23:00:00	0.0000	0.0000	0.0000	0.0000	0.00371	0.00371
23:30:00	0.0000	0.0000	0.0000	0.0000	0.00366	0.00366
24:00:00	0.0000	0.0000	0.0000	0.0000	0.00361	0.00361
24:30:00	0.0000	0.0000	0.0000	0.0000	0.00357	0.00357
25:00:00	0.0000	0.0000	0.0000	0.0000	0.00352	0.00352
25:30:00	0.0000	0.0000	0.0000	0.0000	0.00348	0.00348
26:00:00	0.0000	0.0000	0.0000	0.0000	0.00343	0.00343
26:30:00	0.0000	0.0000	0.0000	0.0000	0.00339	0.00339
27:00:00	0.0000	0.0000	0.0000	0.0000	0.00335	0.00335
27:30:00	0.0000	0.0000	0.0000	0.0000	0.0033	0.0033
28:00:00	0.0000	0.0000	0.0000	0.0000	0.00326	0.00326
28:30:00	0.0000	0.0000	0.0000	0.0000	0.00322	0.00322
29:00:00	0.0000	0.0000	0.0000	0.0000	0.00318	0.00318
29:30:00	0.0000	0.0000	0.0000	0.0000	0.00314	0.00314
30:00:00	0.0000	0.0000	0.0000	0.0000	0.0031	0.0031
30:30:00	0.0000	0.0000	0.0000	0.0000	0.00306	0.00306
31:00:00	0.0000	0.0000	0.0000	0.0000	0.00302	0.00302
31:30:00	0.0000	0.0000	0.0000	0.0000	0.00298	0.00298
32:00:00	0.0000	0.0000	0.0000	0.0000	0.00294	0.00294
32:30:00	0.0000	0.0000	0.0000	0.0000	0.0029	0.0029
33:00:00	0.0000	0.0000	0.0000	0.0000	0.00287	0.00287
33:30:00	0.0000	0.0000	0.0000	0.0000	0.00283	0.00283
34:00:00	0.0000	0.0000	0.0000	0.0000	0.00279	0.00279
34:30:00	0.0000	0.0000	0.0000	0.0000	0.00276	0.00276
35:00:00	0.0000	0.0000	0.0000	0.0000	0.00272	0.00272

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	0.00269	0.00269
36:00:00	0.0000	0.0000	0.0000	0.0000	0.00265	0.00265
36:30:00	0.0000	0.0000	0.0000	0.0000	0.00262	0.00262
37:00:00	0.0000	0.0000	0.0000	0.0000	0.00259	0.00259
37:30:00	0.0000	0.0000	0.0000	0.0000	0.00255	0.00255
38:00:00	0.0000	0.0000	0.0000	0.0000	0.00252	0.00252
38:30:00	0.0000	0.0000	0.0000	0.0000	0.00249	0.00249
39:00:00	0.0000	0.0000	0.0000	0.0000	0.00246	0.00246
39:30:00	0.0000	0.0000	0.0000	0.0000	0.00243	0.00243
40:00:00	0.0000	0.0000	0.0000	0.0000	0.00239	0.00239
40:30:00	0.0000	0.0000	0.0000	0.0000	0.00236	0.00236
41:00:00	0.0000	0.0000	0.0000	0.0000	0.00233	0.00233
41:30:00	0.0000	0.0000	0.0000	0.0000	0.0023	0.0023
42:00:00	0.0000	0.0000	0.0000	0.0000	0.00227	0.00227
42:30:00	0.0000	0.0000	0.0000	0.0000	0.00225	0.00225
43:00:00	0.0000	0.0000	0.0000	0.0000	0.00222	0.00222
43:30:00	0.0000	0.0000	0.0000	0.0000	0.00219	0.00219
44:00:00	0.0000	0.0000	0.0000	0.0000	0.00216	0.00216
44:30:00	0.0000	0.0000	0.0000	0.0000	0.00213	0.00213
45:00:00	0.0000	0.0000	0.0000	0.0000	0.00211	0.00211
45:30:00	0.0000	0.0000	0.0000	0.0000	0.00208	0.00208
46:00:00	0.0000	0.0000	0.0000	0.0000	0.00205	0.00205
46:30:00	0.0000	0.0000	0.0000	0.0000	0.00203	0.00203
47:00:00	0.0000	0.0000	0.0000	0.0000	0.002	0.002
47:30:00	0.0000	0.0000	0.0000	0.0000	0.00197	0.00197
48:00:00	0.0000	0.0000	0.0000	0.0000	0.00195	0.00195
48:30:00	0.0000	0.0000	0.0000	0.0000	0.00192	0.00192
49:00:00	0.0000	0.0000	0.0000	0.0000	0.0019	0.0019
49:30:00	0.0000	0.0000	0.0000	0.0000	0.00188	0.00188
50:00:00	0.0000	0.0000	0.0000	0.0000	0.00185	0.00185
50:30:00	0.0000	0.0000	0.0000	0.0000	0.00183	0.00183
51:00:00	0.0000	0.0000	0.0000	0.0000	0.0018	0.0018
51:30:00	0.0000	0.0000	0.0000	0.0000	0.00178	0.00178
52:00:00	0.0000	0.0000	0.0000	0.0000	0.00176	0.00176
52:30:00	0.0000	0.0000	0.0000	0.0000	0.00174	0.00174
53:00:00	0.0000	0.0000	0.0000	0.0000	0.00171	0.00171

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	0.00169	0.00169
54:00:00	0.0000	0.0000	0.0000	0.0000	0.00167	0.00167
54:30:00	0.0000	0.0000	0.0000	0.0000	0.00165	0.00165
55:00:00	0.0000	0.0000	0.0000	0.0000	0.00163	0.00163
55:30:00	0.0000	0.0000	0.0000	0.0000	0.00161	0.00161
56:00:00	0.0000	0.0000	0.0000	0.0000	0.00159	0.00159
56:30:00	0.0000	0.0000	0.0000	0.0000	0.00157	0.00157
57:00:00	0.0000	0.0000	0.0000	0.0000	0.00155	0.00155
57:30:00	0.0000	0.0000	0.0000	0.0000	0.00153	0.00153
58:00:00	0.0000	0.0000	0.0000	0.0000	0.00151	0.00151
58:30:00	0.0000	0.0000	0.0000	0.0000	0.00149	0.00149
59:00:00	0.0000	0.0000	0.0000	0.0000	0.00147	0.00147
59:30:00	0.0000	0.0000	0.0000	0.0000	0.00145	0.00145
60:00:00	0.0000	0.0000	0.0000	0.0000	0.00143	0.00143
60:30:00	0.0000	0.0000	0.0000	0.0000	0.00141	0.00141
61:00:00	0.0000	0.0000	0.0000	0.0000	0.0014	0.0014
61:30:00	0.0000	0.0000	0.0000	0.0000	0.00138	0.00138
62:00:00	0.0000	0.0000	0.0000	0.0000	0.00136	0.00136
62:30:00	0.0000	0.0000	0.0000	0.0000	0.00134	0.00134
63:00:00	0.0000	0.0000	0.0000	0.0000	0.00133	0.00133
63:30:00	0.0000	0.0000	0.0000	0.0000	0.00131	0.00131
64:00:00	0.0000	0.0000	0.0000	0.0000	0.00129	0.00129
64:30:00	0.0000	0.0000	0.0000	0.0000	0.00128	0.00128
65:00:00	0.0000	0.0000	0.0000	0.0000	0.00126	0.00126
65:30:00	0.0000	0.0000	0.0000	0.0000	0.00124	0.00124
66:00:00	0.0000	0.0000	0.0000	0.0000	0.00123	0.00123
66:30:00	0.0000	0.0000	0.0000	0.0000	0.00121	0.00121
67:00:00	0.0000	0.0000	0.0000	0.0000	0.0012	0.0012
67:30:00	0.0000	0.0000	0.0000	0.0000	0.00118	0.00118
68:00:00	0.0000	0.0000	0.0000	0.0000	0.00117	0.00117
68:30:00	0.0000	0.0000	0.0000	0.0000	0.00115	0.00115
69:00:00	0.0000	0.0000	0.0000	0.0000	0.00114	0.00114
69:30:00	0.0000	0.0000	0.0000	0.0000	0.00112	0.00112
70:00:00	0.0000	0.0000	0.0000	0.0000	0.00111	0.00111
70:30:00	0.0000	0.0000	0.0000	0.0000	0.00109	0.00109
71:00:00	0.0000	0.0000	0.0000	0.0000	0.00108	0.00108

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	0.00107	0.00107
72:00:00	0.0000	0.0000	0.0000	0.0000	0.00105	0.00105
72:30:00	0.0000	0.0000	0.0000	0.0000	0.00104	0.00104
73:00:00	0.0000	0.0000	0.0000	0.0000	0.00102	0.00102
73:30:00	0.0000	0.0000	0.0000	0.0000	0.00101	0.00101
74:00:00	0.0000	0.0000	0.0000	0.0000	0.000999	0.000999
74:30:00	0.0000	0.0000	0.0000	0.0000	0.000986	0.000986
75:00:00	0.0000	0.0000	0.0000	0.0000	0.000974	0.000974
75:30:00	0.0000	0.0000	0.0000	0.0000	0.000961	0.000961
76:00:00	0.0000	0.0000	0.0000	0.0000	0.000949	0.000949
76:30:00	0.0000	0.0000	0.0000	0.0000	0.000937	0.000937
77:00:00	0.0000	0.0000	0.0000	0.0000	0.000925	0.000925
77:30:00	0.0000	0.0000	0.0000	0.0000	0.000913	0.000913
78:00:00	0.0000	0.0000	0.0000	0.0000	0.000901	0.000901
78:30:00	0.0000	0.0000	0.0000	0.0000	0.00089	0.00089
79:00:00	0.0000	0.0000	0.0000	0.0000	0.000878	0.000878
79:30:00	0.0000	0.0000	0.0000	0.0000	0.000867	0.000867
80:00:00	0.0000	0.0000	0.0000	0.0000	0.000856	0.000856
80:30:00	0.0000	0.0000	0.0000	0.0000	0.000845	0.000845
81:00:00	0.0000	0.0000	0.0000	0.0000	0.000834	0.000834
81:30:00	0.0000	0.0000	0.0000	0.0000	0.000824	0.000824
82:00:00	0.0000	0.0000	0.0000	0.0000	0.000813	0.000813
82:30:00	0.0000	0.0000	0.0000	0.0000	0.000803	0.000803
83:00:00	0.0000	0.0000	0.0000	0.0000	0.000793	0.000793
83:30:00	0.0000	0.0000	0.0000	0.0000	0.000782	0.000782
84:00:00	0.0000	0.0000	0.0000	0.0000	0.000772	0.000772
84:30:00	0.0000	0.0000	0.0000	0.0000	0.000763	0.000763
85:00:00	0.0000	0.0000	0.0000	0.0000	0.000753	0.000753
85:30:00	0.0000	0.0000	0.0000	0.0000	0.000743	0.000743
86:00:00	0.0000	0.0000	0.0000	0.0000	0.000734	0.000734
86:30:00	0.0000	0.0000	0.0000	0.0000	0.000724	0.000724
87:00:00	0.0000	0.0000	0.0000	0.0000	0.000715	0.000715
87:30:00	0.0000	0.0000	0.0000	0.0000	0.000706	0.000706
88:00:00	0.0000	0.0000	0.0000	0.0000	0.000697	0.000697
88:30:00	0.0000	0.0000	0.0000	0.0000	0.000688	0.000688
89:00:00	0.0000	0.0000	0.0000	0.0000	0.000679	0.000679

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	0.000671	0.000671
90:00:00	0.0000	0.0000	0.0000	0.0000	0.000662	0.000662

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