

UK Design Flood Estimation

Generated on 05 May 2021 08:28:27 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

Summary of results

Rainfall - FEH 2013 model (mm):	61.50	Total runoff (ML):	0.86
Total Rainfall (mm):	39.32	Total flow (ML):	2.01
Peak Rainfall (mm):	8.93	Peak flow (m ³ /s):	0.04

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 [1.71]	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	1.57	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	0.8632	0.0000	0.3249	0.0000	0.00147	0.00147
00:30:00	1.4463	0.0000	0.5487	0.0001	0.00145	0.00153
01:00:00	2.4104	0.0000	0.9267	0.0004	0.00144	0.00181
01:30:00	3.9856	0.0000	1.5657	0.0010	0.00143	0.00246
02:00:00	6.4861	0.0000	2.6372	0.0023	0.00144	0.00374
02:30:00	8.9349	0.0000	3.8137	0.0046	0.00147	0.00606
03:00:00	6.4861	0.0000	2.8997	0.0084	0.00155	0.00997
03:30:00	3.9856	0.0000	1.8366	0.0138	0.0017	0.0155
04:00:00	2.4104	0.0000	1.1309	0.0199	0.00194	0.0218
04:30:00	1.4463	0.0000	0.6859	0.0262	0.00227	0.0284
05:00:00	0.8632	0.0000	0.4120	0.0319	0.0027	0.0346
05:30:00	0.0000	0.0000	0.0000	0.0363	0.00322	0.0396
06:00:00	0.0000	0.0000	0.0000	0.0388	0.0038	0.0426
06:30:00	0.0000	0.0000	0.0000	0.0388	0.0044	0.0432
07:00:00	0.0000	0.0000	0.0000	0.0369	0.00499	0.0419
07:30:00	0.0000	0.0000	0.0000	0.0340	0.00554	0.0395
08:00:00	0.0000	0.0000	0.0000	0.0304	0.00603	0.0364
08:30:00	0.0000	0.0000	0.0000	0.0267	0.00646	0.0331
09:00:00	0.0000	0.0000	0.0000	0.0230	0.00682	0.0298
09:30:00	0.0000	0.0000	0.0000	0.0198	0.00711	0.0269
10:00:00	0.0000	0.0000	0.0000	0.0170	0.00735	0.0243
10:30:00	0.0000	0.0000	0.0000	0.0145	0.00755	0.0221
11:00:00	0.0000	0.0000	0.0000	0.0123	0.0077	0.02
11:30:00	0.0000	0.0000	0.0000	0.0103	0.00782	0.0181
12:00:00	0.0000	0.0000	0.0000	0.0085	0.0079	0.0164
12:30:00	0.0000	0.0000	0.0000	0.0067	0.00795	0.0147
13:00:00	0.0000	0.0000	0.0000	0.0052	0.00797	0.0131
13:30:00	0.0000	0.0000	0.0000	0.0037	0.00795	0.0116
14:00:00	0.0000	0.0000	0.0000	0.0024	0.00791	0.0103
14:30:00	0.0000	0.0000	0.0000	0.0014	0.00785	0.00925
15:00:00	0.0000	0.0000	0.0000	0.0007	0.00777	0.00851
15:30:00	0.0000	0.0000	0.0000	0.0004	0.00768	0.00804
16:00:00	0.0000	0.0000	0.0000	0.0001	0.00759	0.00773
16:30:00	0.0000	0.0000	0.0000	0.0000	0.00749	0.00754
17:00:00	0.0000	0.0000	0.0000	0.0000	0.0074	0.0074

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	0.0073	0.0073
18:00:00	0.0000	0.0000	0.0000	0.0000	0.00721	0.00721
18:30:00	0.0000	0.0000	0.0000	0.0000	0.00712	0.00712
19:00:00	0.0000	0.0000	0.0000	0.0000	0.00703	0.00703
19:30:00	0.0000	0.0000	0.0000	0.0000	0.00694	0.00694
20:00:00	0.0000	0.0000	0.0000	0.0000	0.00685	0.00685
20:30:00	0.0000	0.0000	0.0000	0.0000	0.00676	0.00676
21:00:00	0.0000	0.0000	0.0000	0.0000	0.00668	0.00668
21:30:00	0.0000	0.0000	0.0000	0.0000	0.00659	0.00659
22:00:00	0.0000	0.0000	0.0000	0.0000	0.00651	0.00651
22:30:00	0.0000	0.0000	0.0000	0.0000	0.00642	0.00642
23:00:00	0.0000	0.0000	0.0000	0.0000	0.00634	0.00634
23:30:00	0.0000	0.0000	0.0000	0.0000	0.00626	0.00626
24:00:00	0.0000	0.0000	0.0000	0.0000	0.00618	0.00618
24:30:00	0.0000	0.0000	0.0000	0.0000	0.0061	0.0061
25:00:00	0.0000	0.0000	0.0000	0.0000	0.00602	0.00602
25:30:00	0.0000	0.0000	0.0000	0.0000	0.00595	0.00595
26:00:00	0.0000	0.0000	0.0000	0.0000	0.00587	0.00587
26:30:00	0.0000	0.0000	0.0000	0.0000	0.0058	0.0058
27:00:00	0.0000	0.0000	0.0000	0.0000	0.00572	0.00572
27:30:00	0.0000	0.0000	0.0000	0.0000	0.00565	0.00565
28:00:00	0.0000	0.0000	0.0000	0.0000	0.00558	0.00558
28:30:00	0.0000	0.0000	0.0000	0.0000	0.0055	0.0055
29:00:00	0.0000	0.0000	0.0000	0.0000	0.00543	0.00543
29:30:00	0.0000	0.0000	0.0000	0.0000	0.00537	0.00537
30:00:00	0.0000	0.0000	0.0000	0.0000	0.0053	0.0053
30:30:00	0.0000	0.0000	0.0000	0.0000	0.00523	0.00523
31:00:00	0.0000	0.0000	0.0000	0.0000	0.00516	0.00516
31:30:00	0.0000	0.0000	0.0000	0.0000	0.0051	0.0051
32:00:00	0.0000	0.0000	0.0000	0.0000	0.00503	0.00503
32:30:00	0.0000	0.0000	0.0000	0.0000	0.00497	0.00497
33:00:00	0.0000	0.0000	0.0000	0.0000	0.0049	0.0049
33:30:00	0.0000	0.0000	0.0000	0.0000	0.00484	0.00484
34:00:00	0.0000	0.0000	0.0000	0.0000	0.00478	0.00478
34:30:00	0.0000	0.0000	0.0000	0.0000	0.00472	0.00472
35:00:00	0.0000	0.0000	0.0000	0.0000	0.00466	0.00466

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	0.0046	0.0046
36:00:00	0.0000	0.0000	0.0000	0.0000	0.00454	0.00454
36:30:00	0.0000	0.0000	0.0000	0.0000	0.00448	0.00448
37:00:00	0.0000	0.0000	0.0000	0.0000	0.00442	0.00442
37:30:00	0.0000	0.0000	0.0000	0.0000	0.00437	0.00437
38:00:00	0.0000	0.0000	0.0000	0.0000	0.00431	0.00431
38:30:00	0.0000	0.0000	0.0000	0.0000	0.00426	0.00426
39:00:00	0.0000	0.0000	0.0000	0.0000	0.0042	0.0042
39:30:00	0.0000	0.0000	0.0000	0.0000	0.00415	0.00415
40:00:00	0.0000	0.0000	0.0000	0.0000	0.0041	0.0041
40:30:00	0.0000	0.0000	0.0000	0.0000	0.00404	0.00404
41:00:00	0.0000	0.0000	0.0000	0.0000	0.00399	0.00399
41:30:00	0.0000	0.0000	0.0000	0.0000	0.00394	0.00394
42:00:00	0.0000	0.0000	0.0000	0.0000	0.00389	0.00389
42:30:00	0.0000	0.0000	0.0000	0.0000	0.00384	0.00384
43:00:00	0.0000	0.0000	0.0000	0.0000	0.00379	0.00379
43:30:00	0.0000	0.0000	0.0000	0.0000	0.00374	0.00374
44:00:00	0.0000	0.0000	0.0000	0.0000	0.0037	0.0037
44:30:00	0.0000	0.0000	0.0000	0.0000	0.00365	0.00365
45:00:00	0.0000	0.0000	0.0000	0.0000	0.0036	0.0036
45:30:00	0.0000	0.0000	0.0000	0.0000	0.00356	0.00356
46:00:00	0.0000	0.0000	0.0000	0.0000	0.00351	0.00351
46:30:00	0.0000	0.0000	0.0000	0.0000	0.00347	0.00347
47:00:00	0.0000	0.0000	0.0000	0.0000	0.00342	0.00342
47:30:00	0.0000	0.0000	0.0000	0.0000	0.00338	0.00338
48:00:00	0.0000	0.0000	0.0000	0.0000	0.00333	0.00333
48:30:00	0.0000	0.0000	0.0000	0.0000	0.00329	0.00329
49:00:00	0.0000	0.0000	0.0000	0.0000	0.00325	0.00325
49:30:00	0.0000	0.0000	0.0000	0.0000	0.00321	0.00321
50:00:00	0.0000	0.0000	0.0000	0.0000	0.00317	0.00317
50:30:00	0.0000	0.0000	0.0000	0.0000	0.00313	0.00313
51:00:00	0.0000	0.0000	0.0000	0.0000	0.00309	0.00309
51:30:00	0.0000	0.0000	0.0000	0.0000	0.00305	0.00305
52:00:00	0.0000	0.0000	0.0000	0.0000	0.00301	0.00301
52:30:00	0.0000	0.0000	0.0000	0.0000	0.00297	0.00297
53:00:00	0.0000	0.0000	0.0000	0.0000	0.00293	0.00293

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	0.00289	0.00289
54:00:00	0.0000	0.0000	0.0000	0.0000	0.00286	0.00286
54:30:00	0.0000	0.0000	0.0000	0.0000	0.00282	0.00282
55:00:00	0.0000	0.0000	0.0000	0.0000	0.00278	0.00278
55:30:00	0.0000	0.0000	0.0000	0.0000	0.00275	0.00275
56:00:00	0.0000	0.0000	0.0000	0.0000	0.00271	0.00271
56:30:00	0.0000	0.0000	0.0000	0.0000	0.00268	0.00268
57:00:00	0.0000	0.0000	0.0000	0.0000	0.00265	0.00265
57:30:00	0.0000	0.0000	0.0000	0.0000	0.00261	0.00261
58:00:00	0.0000	0.0000	0.0000	0.0000	0.00258	0.00258
58:30:00	0.0000	0.0000	0.0000	0.0000	0.00255	0.00255
59:00:00	0.0000	0.0000	0.0000	0.0000	0.00251	0.00251
59:30:00	0.0000	0.0000	0.0000	0.0000	0.00248	0.00248
60:00:00	0.0000	0.0000	0.0000	0.0000	0.00245	0.00245
60:30:00	0.0000	0.0000	0.0000	0.0000	0.00242	0.00242
61:00:00	0.0000	0.0000	0.0000	0.0000	0.00239	0.00239
61:30:00	0.0000	0.0000	0.0000	0.0000	0.00236	0.00236
62:00:00	0.0000	0.0000	0.0000	0.0000	0.00233	0.00233
62:30:00	0.0000	0.0000	0.0000	0.0000	0.0023	0.0023
63:00:00	0.0000	0.0000	0.0000	0.0000	0.00227	0.00227
63:30:00	0.0000	0.0000	0.0000	0.0000	0.00224	0.00224
64:00:00	0.0000	0.0000	0.0000	0.0000	0.00221	0.00221
64:30:00	0.0000	0.0000	0.0000	0.0000	0.00218	0.00218
65:00:00	0.0000	0.0000	0.0000	0.0000	0.00215	0.00215
65:30:00	0.0000	0.0000	0.0000	0.0000	0.00213	0.00213
66:00:00	0.0000	0.0000	0.0000	0.0000	0.0021	0.0021
66:30:00	0.0000	0.0000	0.0000	0.0000	0.00207	0.00207
67:00:00	0.0000	0.0000	0.0000	0.0000	0.00205	0.00205
67:30:00	0.0000	0.0000	0.0000	0.0000	0.00202	0.00202
68:00:00	0.0000	0.0000	0.0000	0.0000	0.00199	0.00199
68:30:00	0.0000	0.0000	0.0000	0.0000	0.00197	0.00197
69:00:00	0.0000	0.0000	0.0000	0.0000	0.00194	0.00194
69:30:00	0.0000	0.0000	0.0000	0.0000	0.00192	0.00192
70:00:00	0.0000	0.0000	0.0000	0.0000	0.00189	0.00189
70:30:00	0.0000	0.0000	0.0000	0.0000	0.00187	0.00187
71:00:00	0.0000	0.0000	0.0000	0.0000	0.00185	0.00185

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	0.00182	0.00182
72:00:00	0.0000	0.0000	0.0000	0.0000	0.0018	0.0018
72:30:00	0.0000	0.0000	0.0000	0.0000	0.00178	0.00178
73:00:00	0.0000	0.0000	0.0000	0.0000	0.00175	0.00175
73:30:00	0.0000	0.0000	0.0000	0.0000	0.00173	0.00173
74:00:00	0.0000	0.0000	0.0000	0.0000	0.00171	0.00171
74:30:00	0.0000	0.0000	0.0000	0.0000	0.00169	0.00169
75:00:00	0.0000	0.0000	0.0000	0.0000	0.00166	0.00166
75:30:00	0.0000	0.0000	0.0000	0.0000	0.00164	0.00164
76:00:00	0.0000	0.0000	0.0000	0.0000	0.00162	0.00162
76:30:00	0.0000	0.0000	0.0000	0.0000	0.0016	0.0016
77:00:00	0.0000	0.0000	0.0000	0.0000	0.00158	0.00158
77:30:00	0.0000	0.0000	0.0000	0.0000	0.00156	0.00156
78:00:00	0.0000	0.0000	0.0000	0.0000	0.00154	0.00154
78:30:00	0.0000	0.0000	0.0000	0.0000	0.00152	0.00152
79:00:00	0.0000	0.0000	0.0000	0.0000	0.0015	0.0015
79:30:00	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