

UK Design Flood Estimation

Generated on 05 May 2021 08:26:18 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: 30 year

Summary of results

Rainfall - FEH 2013 model (mm):	48.74	Total runoff (ML):	0.66
Total Rainfall (mm):	31.16	Total flow (ML):	1.59
Peak Rainfall (mm):	7.08	Peak flow (m ³ /s):	0.03

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	1.65	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	0.6840	0.0000	0.2573	0.0000	0.00147	0.00147
00:30:00	1.1460	0.0000	0.4338	0.0001	0.00145	0.00152
01:00:00	1.9100	0.0000	0.7307	0.0003	0.00144	0.00173
01:30:00	3.1582	0.0000	1.2292	0.0008	0.00143	0.00224
02:00:00	5.1397	0.0000	2.0563	0.0018	0.00143	0.00325
02:30:00	7.0801	0.0000	2.9462	0.0036	0.00145	0.00507
03:00:00	5.1397	0.0000	2.2211	0.0066	0.00152	0.00813
03:30:00	3.1582	0.0000	1.3992	0.0108	0.00164	0.0124
04:00:00	1.9100	0.0000	0.8589	0.0155	0.00183	0.0174
04:30:00	1.1460	0.0000	0.5200	0.0204	0.0021	0.0225
05:00:00	0.6840	0.0000	0.3120	0.0248	0.00244	0.0272
05:30:00	0.0000	0.0000	0.0000	0.0282	0.00286	0.031
06:00:00	0.0000	0.0000	0.0000	0.0300	0.00332	0.0333
06:30:00	0.0000	0.0000	0.0000	0.0300	0.00381	0.0338
07:00:00	0.0000	0.0000	0.0000	0.0285	0.00428	0.0328
07:30:00	0.0000	0.0000	0.0000	0.0262	0.00472	0.0309
08:00:00	0.0000	0.0000	0.0000	0.0234	0.00511	0.0285
08:30:00	0.0000	0.0000	0.0000	0.0205	0.00545	0.026
09:00:00	0.0000	0.0000	0.0000	0.0177	0.00574	0.0234
09:30:00	0.0000	0.0000	0.0000	0.0152	0.00597	0.0212
10:00:00	0.0000	0.0000	0.0000	0.0130	0.00616	0.0192
10:30:00	0.0000	0.0000	0.0000	0.0112	0.00632	0.0175
11:00:00	0.0000	0.0000	0.0000	0.0094	0.00644	0.0159
11:30:00	0.0000	0.0000	0.0000	0.0079	0.00653	0.0144
12:00:00	0.0000	0.0000	0.0000	0.0065	0.00659	0.0131
12:30:00	0.0000	0.0000	0.0000	0.0052	0.00663	0.0118
13:00:00	0.0000	0.0000	0.0000	0.0039	0.00663	0.0106
13:30:00	0.0000	0.0000	0.0000	0.0028	0.00662	0.00942
14:00:00	0.0000	0.0000	0.0000	0.0018	0.00658	0.00841
14:30:00	0.0000	0.0000	0.0000	0.0011	0.00653	0.00759
15:00:00	0.0000	0.0000	0.0000	0.0006	0.00646	0.00702
15:30:00	0.0000	0.0000	0.0000	0.0003	0.00639	0.00666
16:00:00	0.0000	0.0000	0.0000	0.0001	0.00631	0.00642
16:30:00	0.0000	0.0000	0.0000	0.0000	0.00623	0.00626
17:00:00	0.0000	0.0000	0.0000	0.0000	0.00615	0.00616

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	0.00608	0.00608
18:00:00	0.0000	0.0000	0.0000	0.0000	0.006	0.006
18:30:00	0.0000	0.0000	0.0000	0.0000	0.00592	0.00592
19:00:00	0.0000	0.0000	0.0000	0.0000	0.00585	0.00585
19:30:00	0.0000	0.0000	0.0000	0.0000	0.00577	0.00577
20:00:00	0.0000	0.0000	0.0000	0.0000	0.0057	0.0057
20:30:00	0.0000	0.0000	0.0000	0.0000	0.00562	0.00562
21:00:00	0.0000	0.0000	0.0000	0.0000	0.00555	0.00555
21:30:00	0.0000	0.0000	0.0000	0.0000	0.00548	0.00548
22:00:00	0.0000	0.0000	0.0000	0.0000	0.00541	0.00541
22:30:00	0.0000	0.0000	0.0000	0.0000	0.00534	0.00534
23:00:00	0.0000	0.0000	0.0000	0.0000	0.00527	0.00527
23:30:00	0.0000	0.0000	0.0000	0.0000	0.00521	0.00521
24:00:00	0.0000	0.0000	0.0000	0.0000	0.00514	0.00514
24:30:00	0.0000	0.0000	0.0000	0.0000	0.00507	0.00507
25:00:00	0.0000	0.0000	0.0000	0.0000	0.00501	0.00501
25:30:00	0.0000	0.0000	0.0000	0.0000	0.00495	0.00495
26:00:00	0.0000	0.0000	0.0000	0.0000	0.00488	0.00488
26:30:00	0.0000	0.0000	0.0000	0.0000	0.00482	0.00482
27:00:00	0.0000	0.0000	0.0000	0.0000	0.00476	0.00476
27:30:00	0.0000	0.0000	0.0000	0.0000	0.0047	0.0047
28:00:00	0.0000	0.0000	0.0000	0.0000	0.00464	0.00464
28:30:00	0.0000	0.0000	0.0000	0.0000	0.00458	0.00458
29:00:00	0.0000	0.0000	0.0000	0.0000	0.00452	0.00452
29:30:00	0.0000	0.0000	0.0000	0.0000	0.00446	0.00446
30:00:00	0.0000	0.0000	0.0000	0.0000	0.00441	0.00441
30:30:00	0.0000	0.0000	0.0000	0.0000	0.00435	0.00435
31:00:00	0.0000	0.0000	0.0000	0.0000	0.00429	0.00429
31:30:00	0.0000	0.0000	0.0000	0.0000	0.00424	0.00424
32:00:00	0.0000	0.0000	0.0000	0.0000	0.00418	0.00418
32:30:00	0.0000	0.0000	0.0000	0.0000	0.00413	0.00413
33:00:00	0.0000	0.0000	0.0000	0.0000	0.00408	0.00408
33:30:00	0.0000	0.0000	0.0000	0.0000	0.00403	0.00403
34:00:00	0.0000	0.0000	0.0000	0.0000	0.00397	0.00397
34:30:00	0.0000	0.0000	0.0000	0.0000	0.00392	0.00392
35:00:00	0.0000	0.0000	0.0000	0.0000	0.00387	0.00387

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	0.00382	0.00382
36:00:00	0.0000	0.0000	0.0000	0.0000	0.00378	0.00378
36:30:00	0.0000	0.0000	0.0000	0.0000	0.00373	0.00373
37:00:00	0.0000	0.0000	0.0000	0.0000	0.00368	0.00368
37:30:00	0.0000	0.0000	0.0000	0.0000	0.00363	0.00363
38:00:00	0.0000	0.0000	0.0000	0.0000	0.00359	0.00359
38:30:00	0.0000	0.0000	0.0000	0.0000	0.00354	0.00354
39:00:00	0.0000	0.0000	0.0000	0.0000	0.00349	0.00349
39:30:00	0.0000	0.0000	0.0000	0.0000	0.00345	0.00345
40:00:00	0.0000	0.0000	0.0000	0.0000	0.00341	0.00341
40:30:00	0.0000	0.0000	0.0000	0.0000	0.00336	0.00336
41:00:00	0.0000	0.0000	0.0000	0.0000	0.00332	0.00332
41:30:00	0.0000	0.0000	0.0000	0.0000	0.00328	0.00328
42:00:00	0.0000	0.0000	0.0000	0.0000	0.00324	0.00324
42:30:00	0.0000	0.0000	0.0000	0.0000	0.00319	0.00319
43:00:00	0.0000	0.0000	0.0000	0.0000	0.00315	0.00315
43:30:00	0.0000	0.0000	0.0000	0.0000	0.00311	0.00311
44:00:00	0.0000	0.0000	0.0000	0.0000	0.00307	0.00307
44:30:00	0.0000	0.0000	0.0000	0.0000	0.00303	0.00303
45:00:00	0.0000	0.0000	0.0000	0.0000	0.003	0.003
45:30:00	0.0000	0.0000	0.0000	0.0000	0.00296	0.00296
46:00:00	0.0000	0.0000	0.0000	0.0000	0.00292	0.00292
46:30:00	0.0000	0.0000	0.0000	0.0000	0.00288	0.00288
47:00:00	0.0000	0.0000	0.0000	0.0000	0.00285	0.00285
47:30:00	0.0000	0.0000	0.0000	0.0000	0.00281	0.00281
48:00:00	0.0000	0.0000	0.0000	0.0000	0.00277	0.00277
48:30:00	0.0000	0.0000	0.0000	0.0000	0.00274	0.00274
49:00:00	0.0000	0.0000	0.0000	0.0000	0.0027	0.0027
49:30:00	0.0000	0.0000	0.0000	0.0000	0.00267	0.00267
50:00:00	0.0000	0.0000	0.0000	0.0000	0.00263	0.00263
50:30:00	0.0000	0.0000	0.0000	0.0000	0.0026	0.0026
51:00:00	0.0000	0.0000	0.0000	0.0000	0.00257	0.00257
51:30:00	0.0000	0.0000	0.0000	0.0000	0.00253	0.00253
52:00:00	0.0000	0.0000	0.0000	0.0000	0.0025	0.0025
52:30:00	0.0000	0.0000	0.0000	0.0000	0.00247	0.00247
53:00:00	0.0000	0.0000	0.0000	0.0000	0.00244	0.00244

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	0.00241	0.00241
54:00:00	0.0000	0.0000	0.0000	0.0000	0.00238	0.00238
54:30:00	0.0000	0.0000	0.0000	0.0000	0.00235	0.00235
55:00:00	0.0000	0.0000	0.0000	0.0000	0.00232	0.00232
55:30:00	0.0000	0.0000	0.0000	0.0000	0.00229	0.00229
56:00:00	0.0000	0.0000	0.0000	0.0000	0.00226	0.00226
56:30:00	0.0000	0.0000	0.0000	0.0000	0.00223	0.00223
57:00:00	0.0000	0.0000	0.0000	0.0000	0.0022	0.0022
57:30:00	0.0000	0.0000	0.0000	0.0000	0.00217	0.00217
58:00:00	0.0000	0.0000	0.0000	0.0000	0.00214	0.00214
58:30:00	0.0000	0.0000	0.0000	0.0000	0.00212	0.00212
59:00:00	0.0000	0.0000	0.0000	0.0000	0.00209	0.00209
59:30:00	0.0000	0.0000	0.0000	0.0000	0.00206	0.00206
60:00:00	0.0000	0.0000	0.0000	0.0000	0.00204	0.00204
60:30:00	0.0000	0.0000	0.0000	0.0000	0.00201	0.00201
61:00:00	0.0000	0.0000	0.0000	0.0000	0.00198	0.00198
61:30:00	0.0000	0.0000	0.0000	0.0000	0.00196	0.00196
62:00:00	0.0000	0.0000	0.0000	0.0000	0.00193	0.00193
62:30:00	0.0000	0.0000	0.0000	0.0000	0.00191	0.00191
63:00:00	0.0000	0.0000	0.0000	0.0000	0.00189	0.00189
63:30:00	0.0000	0.0000	0.0000	0.0000	0.00186	0.00186
64:00:00	0.0000	0.0000	0.0000	0.0000	0.00184	0.00184
64:30:00	0.0000	0.0000	0.0000	0.0000	0.00181	0.00181
65:00:00	0.0000	0.0000	0.0000	0.0000	0.00179	0.00179
65:30:00	0.0000	0.0000	0.0000	0.0000	0.00177	0.00177
66:00:00	0.0000	0.0000	0.0000	0.0000	0.00175	0.00175
66:30:00	0.0000	0.0000	0.0000	0.0000	0.00172	0.00172
67:00:00	0.0000	0.0000	0.0000	0.0000	0.0017	0.0017
67:30:00	0.0000	0.0000	0.0000	0.0000	0.00168	0.00168
68:00:00	0.0000	0.0000	0.0000	0.0000	0.00166	0.00166
68:30:00	0.0000	0.0000	0.0000	0.0000	0.00164	0.00164
69:00:00	0.0000	0.0000	0.0000	0.0000	0.00162	0.00162
69:30:00	0.0000	0.0000	0.0000	0.0000	0.0016	0.0016
70:00:00	0.0000	0.0000	0.0000	0.0000	0.00157	0.00157
70:30:00	0.0000	0.0000	0.0000	0.0000	0.00155	0.00155
71:00:00	0.0000	0.0000	0.0000	0.0000	0.00153	0.00153

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	0.00152	0.00152
72:00:00	0.0000	0.0000	0.0000	0.0000	0.0015	0.0015

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