

**HIFLOWS-UK  
DATA UPDATE TO 30 SEPTEMBER 2009  
DATA VERSION 3.1.2  
RELEASE DATE DECEMBER 2011  
NOTE ON CHANGES FROM VERSION 3.02**

V3.1.2 contains corrections, but no other changes from V3.1.1, released July 2011.

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## HIFLOWS-UK V3.1.1

The current version of HiFlows-UK (v3.1.1) contains AMAX and POT data for 953 gauging stations, of which 753 are within England and Wales. 155 in Scotland and 45 in Northern Ireland. This is 13 stations fewer than HiFlows-UK v3.02 - 14 stations have been removed and 1 station added.

589 stations are recommended for use in FEH pooling groups ("OK for Pooling"), 251 are suitable for QMED (but not for pooling) and 103 stations are not suitable either for QMED or for pooling.

HiFlows-UK version 3.1.1 updates records to the end of September 2009. However, the exceptional events in Cumbria in November 2009 have been included in the annual maxima series at 26 stations where the event was the highest or second highest on record, or (in two cases) where it was the third highest in a long period of record, and the station is classed as at least OK for QMED.

Stations in Scotland (SEPA) were not updated as part of HiFlows-UK v3.1.1, and data for these stations ends in September 2006.

## DETAILS OF CHANGES TO STATION LIST

### 1.1 Stations added or removed

The following stations have been added:

CEH ref	EA Region	Watercourse	Location
68018	North West	Dane	Congleton Park

The following 14 stations have been removed (stations in **bold** font are now Closed) because of data quality:

CEH ref	EA Region	Watercourse	Location
27048	North East	Derwent	West Ayton
39040	Thames	Thames	Cricklade
44807	South West	Win	Winfrith
<b>47803</b>	<b>South West</b>	<b>Lhb Trib</b>	<b>Left Bank Tributary of River Wolf</b>
47804	South West	Hennard Stream	Moors Mill
<b>48802</b>	<b>South West</b>	<b>Carnon</b>	<b>Devoran Bridge</b>
<b>50801</b>	<b>South West</b>	<b>Yeo</b>	<b>Parkham</b>
54010	Midlands	Stour (Warks)	Alscot Park
55022	Wales	Trothy	Mitchel Troy
58010	Wales	Hepste	Esgair Carnau
64005	Wales	Wnion	Dolgellau
<b>66003</b>	<b>Wales</b>	<b>Aled</b>	<b>Brun Aled</b>
67019	Wales	Tryweryn	Weir X
<b>72013</b>	<b>North West</b>	<b>Borrow Beck</b>	<b>Borrow Bridge Weir</b>

### 1.2 Stations with combined AMAX records

Stations where the records were not combined in version 3.02 are in **bold**.

Superseded Station	New (open) station
27008 Leckby	27071 Crakehill
54906 Kidderminster Gilt Edge	54006 Kidderminster Callows Lane
76002 Warwick Bridge	76810 Great Corby
73003 Burneside	73016 Bowston
<b>27027 Ilkley</b>	<b>27043 Addingham</b>

Stations 27027 Ilkley & Addingham 27043 have been combined for the first time in version 3.1. Although HiFlows-UK version 2.2.1 presented a combined record for 54907 Broom Old & 54007 Broom New, versions 3.02 and 3.1 present separate files because the stations have different Indicative suitabilities.

## 2 CATCHMENT DESCRIPTORS

### 2.1 Catchment descriptors shown on the Station home pages

In version HiFlows-UK 2.2.1, the catchment descriptors shown on the Station Home pages were as the FEH CD-ROM version 1.0, 1999. HiFlows-UK version 3.02 updated the catchment descriptors on the Station Home pages to FEH version 2.0, 2006. This was carried over into HiFlows-UK version 3.1.1.

### 2.2 FEH catchment descriptors, version 3

In last update (i.e. HiFlows-UK version 3.02), the new .cd3 files produced by CEH were included in the export of FEH WINFAP files. The .cd3 files include two new catchment descriptors:

FPEXT Floodplain extent  
CENTROID Centroid of catchment

HiFlows-UK v3.1.1 presents .cd3 files for all catchments with .cd2 files, as in the last update.

## 3 INDICATIVE SUITABILITIES

### 3.1 Indicative Suitabilities – Changes from HiFlows-UK v3.02

Station			HiFlows-UK v3.02		HiFlows-UK v3.1	
CEH Number	Station Name	EA Region	Suitable for QMED	Suitable for Pooling	Suitable for QMED	Suitable for Pooling
34004	Costessey Mill	Anglian	YES	NO	NO	NO
36002	Glemsford	Anglian	YES	YES	YES	NO
27027	Ilkley	North East	YES	NO	YES	YES
68018	Congleton Park*	North West	n/a	n/a	YES	YES
69011	Cheadle	North West	YES	YES	YES	NO
69020	London Road	North West	YES	NO	NO	NO
69023	Blackford Bridge	North West	YES	NO	YES	YES
72006	Kirkby Lonsdale	North West	YES	YES	YES	NO
75007	Threlkeld	North West	YES	YES	YES	NO
73015	High Keer Weir	North West	YES	NO	YES	YES
47010	Crowford Bridge	South West	YES	YES	NO	NO
49001	Denby	South West	YES	YES	NO	NO
40006	Hadlow	Southern	YES	YES	NO	NO
40017	Burwash	Southern	YES	NO	NO	NO
39004	Beddington Park	Thames	YES	YES	YES	NO
39081	Abingdon	Thames	YES	YES	YES	NO
60005	Llandoverly	Welsh	NO	NO	YES	NO
67020	Chester Weir	Welsh	YES	NO	NO	NO

\*A new station, i.e. not present in HiFlows-UK v3.02

### 3.2 Stations where suitabilities change during the period of record

The table below gives a detailed summary on changes to Suitabilities part way through the record. The periods indicated are listed as Rejected years in .am and .pt files, and are shown as red in the images on AMAX and POT webpages. Stations with significant rejected periods because of other reasons are listed in section 3.3.

Stations marked in **bold** were added as part of HiFlows-UK v3.1.1 update. No stations were removed from this list.

CEH Reference	Station name	Region	Suitability for QMED	Suitability for pooling	Rejected period	
					Start date	End date
30006	Leasingham Mill	Anglian	Yes – Q Modular limit pre 84=3m <sup>3</sup> /s, post 84=12m <sup>3</sup> /s greater than QMED 2m <sup>3</sup> /s	Yes – After 1984, weir remains modular for all range of flows plus gauged throughout range.	13/03/1974	30/10/1984
32002	Fotheringhay	Anglian	Yes - Data 1938-2000 suitable for QMED estimation	No - Both ratings unreliable at high flows. Flume bypassed at high flows resulting in considerable flood plain flow. New weir has not been gauged at high flows but is likely to be similarly bypassed.	31/03/2000	30/09/2009
33002	Bedford	Anglian	Yes - From Water Year 1959 - gauged above QMED	No - Insufficient high flow gaugings	01/01/1933	30/09/1959
33007	Marham	Anglian	Yes - Q modular limit 6m <sup>3</sup> /s greater than Q MED	Yes - Only for data AFTER 5/4/82 when using Motts non modular rating.	01/10/1953	05/04/1982
33090	Clipstone	Anglian	Yes - From Oct 2006	No - Reliability of higher stage rating unknown	01/01/1957	30/09/2006
39003	S.Wimbledon (Connolly's Mill)	Thames	Yes – From 1964	Yes - Possibly - though complex bypassing and no high flow gaugings	01/01/1939	30/09/1964
39004	Beddington Park	Thames	Yes - From Oct 1964 - see Station description	No - Problems and uncertainties with the station throughout, including the present EM gauge.	01/10/1936	30/09/1991
39005	Wimbledon Common	Thames	Yes - Gauged to above QMED	Yes - From 1961 - Just meets criteria, although the very largest (out of bank) events are uncertain	01/03/1935	30/09/1961
42001	North Fareham	Southern	Yes - From 1991	Yes - From 1991. Rating confirmed at high flows.	01/09/1951	30/09/1991
42003	Brockenhurst	Southern	Yes - From 1996	No - No high flow gaugings, extensive out-of-bank flows	01/10/1960	30/09/1996
54006	Kidderminster Callows Lane	Midlands	Yes - From July 1990 (ultrasonic record)	No - See Station description	01/11/1980	30/06/1990
54022	Plynlimon	Midlands	Yes - from Oct 1971	Yes - from Oct 1971	01/11/1951	30/09/1971
55016	Disserth	Welsh	Yes - from Oct 1972 - gauged to around QMED	No - rating does not fit highest gaugings	29/07/1968	30/09/1972
58002	Resolven	Welsh	Yes - from July 1978, Bankful (rating upper limit) > QMED	Yes - (just) from July 1978. Some bypassing upstream at extreme events.	06/11/1959	30/06/1978
58009	Keepers Lodge	Welsh	Yes - From June 1995 as gaugings > QMED. Not for earlier period (with different rating) as QMED estimate is much larger.	Many high records above upper limit and highest gauging not within 60% of Q(8)	01/11/1971	31/05/1995

CEH Reference	Station name	Region	Suitability for QMED	Suitability for pooling	Rejected period	
					Start date	End date
59001	Ynystanglws	Welsh	Yes - Rating upper limit > QMED	Yes - from 1973 when embankments built	18/10/1956	30/09/1973
61001	Prendergast Mill	Welsh	Yes - from Oct 1971 - gauged above QMED	Although high records within rating limit, need to determine out of bank S-D relationship before good for pooling	28/07/1961	30/09/1971
68003	Rudheath	North West	Yes - From February 1979 only.	No - Overbank flows ungauged, and possible variable backwater.	17/05/1949	30/09/1979
69030	Causey Bridges	North West	Yes - From water year 1983/84. Gaugings extend to around QMED, though show scatter	Much scatter and few gaugings. Highest flows are out of bank, possibly with considerable bypassing.	01/09/1953	31/07/1983
69032	Kirkby	North West	Yes - from 1977 - Gauged above QMED	Yes - from 1977 - OK for all except out-of-bank events.	17/05/1963	06/09/1977
82001	Robstone	SEPA	Yes - Flows prior to June 1982 are not recommended for QMED estimation	Yes - Flows prior to June 1982 are not recommended for pooling	05/09/1963	31/05/1982
84006	Bridgend	SEPA	Yes - only until 01/10/1979 due to scatter in spot gaugings	Yes - only until 01/10/1979 due to scatter in spot gaugings	01/10/1979	30/09/2008

### 3.3 Other Stations with Rejected Periods

Reasons other than change in Indicative suitabilities.

The Rejected periods are marked as Rejected in .pt and .am files and are shown in red in the images on AMAX and POT web pages. Stations with significant rejected periods because of change in suitabilities are listed in table in section 3.2.

Stations marked in **bold** were added as part of HiFlows-UK v3.1.1 update. No stations were removed from this list.

CEH ref	Station Name	EA Region	Rejected Period		Reason
			Start Date	End Date	
23003	Reaverhill	North East	01/10/1980	30/09/2008	Data presented in .pt and .am files are pre-reservoir only.
23007	Rowlands Gill	North East	01/01/1963	30/09/1964	Data presented in .pt and .am files are post-reservoir only.
28058	Ashbourne	Midlands	01/10/1992	30/09/2008	No data from water year 1992/1993 in AM and PT files
<b>43010</b>	<b>Loverley Mill</b>	<b>South West</b>	<b>01/10/1971</b>	<b>30/09/1981</b>	<b>For the earlier period, 1972 to 1981, the NRFA record says that hatch positions should be applied to derive the flows, but there seems to be no info on stage of hatch position. I suggest we do not export the earlier period for use.</b>
48011	Restormel	South West	30/09/1983	30/09/2008	Data presented in .pt and .am files are pre-reservoir only.
67019	Weir X	Welsh	01/10/1964	30/09/2008	Data presented in .pt and .am files are pre-reservoir only.
<b>72003</b>	<b>Wray</b>	<b>North West</b>	<b>25/05/1967</b>	<b>31/12/1990</b>	<b>Data presented in .pt and .am files are for improved record only.</b>
<b>73015</b>	<b>High Keer Weir</b>	<b>North West</b>	<b>01/10/1971</b>	<b>30/09/1990</b>	<b>Data not presented btw dates 1970 - 1971 and when station closed.</b>
203010	Maydown Bridge	Rivers Agency (NI)	23/10/1970	30/09/1990	Post-arterial drainage scheme data presented
203011	Dromona (R16)	Rivers Agency (NI)	25/05/1970	30/09/1990	Post-arterial drainage scheme data presented
203022	Derrymeen Bridge	Rivers Agency (NI)	26/05/1971	30/09/1990	Post-arterial drainage scheme data presented
203043	Shanmoy	Rivers Agency (NI)	09/02/1981	30/09/1986	Pre-weir record intermittent.
206001	Mountmill Bridge	Rivers Agency (NI)	26/10/1971	30/09/1975	Post-arterial drainage scheme data presented

#### Stations with partial record due to damage of station

As in the previous update, the stations below were impacted by damage to the station (the periods are not shown in the .am and .pt files, and are not shown on the webpages), viz:

- 65004 Bontnewydd (Wales) from water year 2004
- 21032 Kirknewton (North East) from water year 2007
- 25004 South Park (North East) from July 2006 (station vandalised)

The following station was also damaged, but the flows are now available and presented in HiFlows-UK v3.1.1:

- 66006 Pont y Gwyddel (Wales)

## 4 PEAKS-OVER-THRESHOLD DATA

### 4.1 List of stations for which Peaks-over-thresholds (.pt files) are not presented

The table below lists stations for which the WINFAP .pt file was not presented as part of the HiFlows-UK v3.1.1 update. There are 60 stations for which the .pt files are not given and they are the same as in the last update (HiFlows-UK v3.02).

CEH Reference	Station Name	EA Region	Suitable for QMED	Suitable for Pooling
26003	Foston Mill	North East	YES	YES
26009	Snakeholme Lock	North East	YES	NO
26010	Snakeholme Lock	North East	YES	NO
26802	Kirby Grindalythe	North East	YES	YES
26803	Driffield	North East	NO	NO
27038	Gatehouses	North East	YES	NO
27073	Snainton Ings	North East	YES	YES
29005	Rase Bishopbridge	Anglian	NO	NO
30005	Saltersford (Old)	Anglian	YES	NO
30006	Leasingham Mill	Anglian	YES	YES
30013	Heighington	Anglian	YES	YES
30015	Stock Rochford	Anglian	NO	NO
31004	Tallington	Anglian	YES	YES
33005	Thornborough	Anglian	YES	YES
33007	Marham	Anglian	YES	YES
33012	Hail Weston (Meagre Farm)	Anglian	YES	NO
33032	Heacham	Anglian	YES	YES
33049	Buckenham Tofts	Anglian	YES	NO
33052	Swaffham Bulbeck	Anglian	YES	NO
33054	Castle Rising	Anglian	YES	YES
34012	Burnham	Anglian	YES	YES
38011	Welwyn (Fulling Mill)	Thames	YES	NO
39010	Denham	Thames	YES	NO
39021	Enslow	Thames	YES	YES
39033	Bagnor	Thames	YES	YES
39034	Cassington	Thames	YES	YES
39037	Marlborough	Thames	YES	NO
39089	Hemel Hempstead (Bury Mill)	Thames	YES	YES
39095	Hither Green (Manor Ho Gardens)	Thames	YES	YES
40033	Crabble Mill	Southern	YES	YES
41015	Westbourne	Southern	YES	YES
41023	Graylingwell	Southern	YES	YES
42005	Broughton	Southern	YES	NO
42006	Mislingford	Southern	YES	NO
42007	Drove Total	Southern	YES	YES
42008	Sewards Bridge	Southern	YES	YES
42009	Borough Bridge	Southern	YES	YES

CEH Reference	Station Name	EA Region	Suitable for QMED	Suitable for Pooling
42010	Allbrook + Highbridge	Southern	YES	YES
42012	Fullerton Total	Southern	YES	YES
42017	Havant	Southern	YES	YES
43003	East Mills Total	South West	YES	YES
43004	Laverstock	South West	YES	NO
43005	Amesbury	South West	YES	YES
43008	South Newton	South West	YES	YES
43010	Loverley Mill	South West	YES	YES
43012	Norton Bavant	South West	YES	YES
43018	Walford Mill	South West	YES	YES
44002	Baggs Mill	South West	YES	NO
44004	Dorchester Combined	South West	YES	NO
44006	Sydling St Nicholas	South West	YES	YES
44008	Winterbourne Steepleton	South West	YES	YES
44009	Broadway	South West	YES	YES
44809	Little Puddle	South West	YES	YES
44810	Briantspuddle	South West	YES	NO
54027	Ebley Mill	Midlands	YES	YES
55035	Iago Flume	Welsh	NO	NO
67020	Chester Weir	Welsh	NO	NO
85001	Linnbrane	SEPA	YES	YES
205999	Control	Rivers Agency (NI)	YES	NO
206006	Recorder 1895	Rivers Agency (NI)	YES	YES

#### 4.2 Differences in .pt files

**Stations for which .pt files were not presented in version 2.2.1, but were presented in version 3.02. These files are also presented in version 3.1.1.**

38001 Lee @ Feildes Weir  
38018 Lee @ Howe Green (Water Hall)  
39014 Ver @ Colney Street (Hansteads)  
39015 Whitewater @ Lodge Farm  
39019 Lambourn @ Shaw  
39020 Coln @ Bibury  
39042 Leach @ Lechdale  
39088 Chess @ Rickmansworth

**Stations for which .pt files were presented in version 2.2.1, but were not presented in version 3.02. These files are also not presented in version 3.1.1.**

30005 Witham @ Saltersford  
33012 Kym @ Meagre Farm (Hail Weston)  
43005 Avon @ Amesbury  
44810 Piddle @ Braintspuddle

The AMAX series were reviewed for three stations in Thames region. The .pt files are not presented because the POT series have not yet been reviewed, and are different from the AMAX series:

39021 Cherwell @ Enslow  
39034 Evenlode @ Cassington  
39095 Quaggy @ Hither Green



#### 4.3 Stations where the Threshold for POT data has changed

CEH ref	Station Name	EA Region	HiFlows UK v3.02 Threshold (m <sup>3</sup> /s)	HiFlows-UK v3.1 Threshold (m <sup>3</sup> /s)
44001	East Stoke Combined	South West	16.71	12
42017	Havant	Southern	2.32	4.7
34004	Costessey Mill	Anglian	0.14	13
73015	High Keer Weir	North West	10.74	6.5

#### 4.4 Stations where the Time to Rise values changed

In HiFlows-UK v3.02 (the last update), the Time to Rise changed for 12 stations in the north west of England (refer to section 4.4 in file "HiFlows-UK - Note\_on\_version\_v3.02"). In this update (HiFlows-UK v3.1.1) there have been no changes to the Time to Rise values.

## 5 CHANGES TO DATA

5.1 Stations where the supplied WISKI POT data were used to replace significant part of the HiFlows-UK data (i.e. not just data for the water year 2008/2009) are listed in the table below.

CEH Reference	Station Name	EA Region	Period of POT data updated in HiFlows-UK v3.1 (beyond the update period of Water Year 2008/2009)	Comment
			Start Date	
26009	Snakeholme Lock	North East	01/10/1999	F3 (ultrasonic) series used
26010	Snakeholme Lock	North East	01/10/2006	F3 (ultrasonic) series used
28003	Water Orton	Midlands	01/10/2004	
34004	Costessey Mill	Anglian	01/10/1979	Change of threshold
40008	Wye	Southern	01/10/1968	Threshold amended (no change to HiFlows UK)
42012	Fullerton Total	Southern	01/10/1999	
43806	Brixton Deverill	South West	01/01/1992	From start of digital data
44004	Dorchester Combined	South West	01/10/2004	Station not updated in last update, so data infilled
54022	Plynlimon	Midlands	January 2002	
54092	Hore Flume	Midlands	January 1974	
54114	Warwick	Midlands	December 1972	
60005	Llandovery	Wales	January 1979	HiFlows UK to use stage data rather than ultrasonic
69041	Broomstairs	North West	March 1998	

## 6 CHANGES TO RATINGS

### 6.1 Ratings have changed at the following stations:

CEH Reference	Station Name	EA Region
27062	Skip Bridge	North East
34001	Colney	Anglian
34011	Fakenham	Anglian
39017	Grendon Underwood	Thames
41028	Chess Bridge	Southern
43010	Loverley Mill	South West
44003	East Bridge Bridport	South West
45003	Woodmill	South West
45819	Collard Bridge	South West
54114	Warwick	Midlands
60005	Llandovery	Welsh
63003	Llanrhystud	Welsh
66006	Pont y Gwyddel	Welsh
73003	Burneside	North West
73010	Newby Bridge Fms	North West
73011	Mint Bridge	North West
73015	High Keer Weir	North West
74002	Galesyke	North West
75002	Camerton	North West
75003	Ouse Bridge	North West
75004	Southwaite Bridge	North West
75009	Low Briery	North West
76001	Burnbanks	North West
76003	Udford	North West
76005	Temple Sowerby	North West
76007	Sheepmount	North West
76008	Greenholme	North West
76010	Harraby Green	North West
76809	Cummersdale	North West
201007	Burdennet Bridge	Northern Ireland

## 7 OTHER CHANGES

### 7.1 Adelphi Weir and Manchester Racecourse

As in last update of HiFlows-UK v3.02, no POT/AMAX data are given for Adelphi Weir (69002) . Plot and data, or Rating plot are shown on the website. The AMAX and POT data have been combined (as in HiFlows-UK version v3.02) and presented for the station Manchester Racecourse (69025) only.

### 7.2 New photographs

New photographs are included for the following stations:

CEH Reference	Station name	EA Region
27009	Skelton	North East
39026	Banbury	Thames
45003	Woodmill	South West
45012	Cowley	South West
47001	Gunnislake	South West
47005	Werrington	South West
47006	Lifton Park	South West
47011	Carnwood	South West
47018	Hayne Bridge	South West
49004	Gwills	South West
68018	Congleton Park	North West
72005	Killington	North West
73005	Sedgwick	North West
73010	Newby Bridge Fms	North West
73012	Victoria Bridge	North West
73016	Bowston	North West
75003	Ouse Bridge	North West
75009	Low Briery	North West

### 7.3 Changes to Map display for stations in England & Wales

#### Amendments to map database in version 3.1.1.

<b>Station</b>	<b>CEH ref</b>	<b>Description of change or problem / Action</b>
<u>Stations added to map database</u>		
Congleton Park	68018	Station added to HiFlows-UK v3.1.1
Manchester Racecourse	69025	Station added to HiFlows-UK v3.02
Hafren Flume	54091	Station added to HiFlows-UK v3.02
Hore Flume	54092	Station added to HiFlows-UK v3.02
Kidderminster Gilt Edge	54906	Station in HiFlows-UK but not in map database
Collyhurst Weir	69043	Station in HiFlows-UK but not in map database
<u>Station location corrected</u>		
Ashton Weir	69007	Location was incorrect - corrected
Hug Bridge	68004	Location was not displayed - corrected
Scotland Weir	69003	Location adjusted
Bury Grounds	69044	Location adjusted
<u>Station removed from WIYBY</u>		
Pitcaple	11004	Removed – station is in north east Scotland