

Appendix B Historic Flooding Tables

APPENDIX B

Table B1 - Historic Flooding Records from watercourses within Kidderminster

ID	Location ¹	Watercourse and Cause ²	Dates	Source	Comments
K1	Shops and Factories	River Stour Cause i	March 1955 and January 1960 (lasting periods < 12 hours)	Flooding Survey, Wyre Forest District Council, March 1997	1960 return period of 1 in 75 years; £3million damage; 100 properties would be affected by 1 in 100 yr flood
K2	Kidderminster (Unspecified)	River Severn Cause i	Oct/Nov 2000	CFMP Final Report June 2005	
K3	Kidderminster (Unspecified)	River Stour Cause i Led to road slippage in Mill Lane	20 th -25 th July 2007	Wyre Forest District Council Cabinet Meeting Interim Report 30 th August 2007 EA Flood Storage report 26/09/2007	Residential Properties and Businesses Road slippage led to evacuation of 6 homes and 2 businesses Kidderminster flood storage reservoir in use and successful
K4	A456 – Blakedown to Kidderminster	Cause i and Cause iv	Jan, May, June, July 2007; April, May, Nov, Sep, Oct, Dec 2006; March, Dec, May, June, July, Oct, Nov 2005; Jan, April, May, Aug, Sep 2004; April, May, June, Oct, Dec 2003	Highways Agency	A number of incidents have been attributed to blocked drains and gullies. Other flooding caused by burst water mains.
K5	A449 – Broadwaters, Summerfield,	Cause i, iii and iv	Jan, Feb, March, May, June, July 2007; Jan, March, July, Aug, Sep, Oct 2006; April, July, Sep, Oct, Nov 2005;	Highways Agency	A number of incidents have been attributed to blocked drains and gullies. Other flooding caused by burst water mains.

			Jan, April, May, Aug, Sep, Oct, Nov 2004; Jan, March June, July, Nov, Dec 2003;		
K6	Staffordshire and Worcestershire Canal	Cause iii	June / July 2007	British Waterways	Caused by Main River water entering canal system.

Notes

1. The above is not an exhaustive list of flooding records.
2. Causes of flooding
 - i. Overflow of watercourses and existing flood defences including water retention facilities such as flood storage reservoirs / washlands and storm water balancing ponds;
 - ii. Breaching of flood defences (including flood storage areas)
 - iii. Mechanical, structural or operational failure (including due to blockages) or hydraulic structures, pumps etc;
 - iv. Localised surface water flooding (including sewer flooding and overland flooding);
 - v. Functional Floodplains or Washlands; and
 - vi. Groundwater flooding.

Table B2 - Historic Flooding Records from watercourses within Bewdley

ID	Location ¹	Watercourse and Cause ²	Dates	Source	Comments
B1	Bewdley (Unspecified)	River Severn Cause i	5 th March 1576	EA CFMP Final Report June 2005, Appendix E; EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006 Appendix B1	"Great Flood"
B2	Bewdley Fair	River Severn Cause i	29 th November 1620	EA CFMP Final Report June 2005, Appendix E	68 drowned "Great flood on Severn" – limited specific details
B3	Orchard Lane to the rear of St Annes House and Lax Lane	Tributary of River Severn Cause i	1923	Flooding Survey, Wyre Forest District Council, March 1997	Orchard Land is poor quality and Lax Lane flooding short lived and passable
B4	Bewdley (throughout)	River Severn Cause i	Severe: 1946, 1947, 1960, 1965 Less Severe: 1990, 1993, 1995	Flooding Survey, Wyre Forest District Council, March 1997 EA CFMP Final Report June 2005, Appendix E EA Upper Severn Area Gaugeboard Data 02/10/2007	Duration up to 24hrs for a 1 in 3 year event Duration up to a week in 1 in 100 year event when depth may be 3m 1995/6 NRA protection scheme proposal rejected by residents for environmental and economic reasons. Up to 175 residential, commercial and tourist properties at risk from 1 in 100yr. Also caravan park [SO 783 758] 1947 5.82m above gaugeboard datum (highest ever known)
B5	Bewdley (throughout)	River Severn 4.99m	30 th October 1998	EA CFMP Final Report June 2005	Largest event in the Severn Uplands region in the preceding 30 years

		Cause i			
B6	Bewdley (throughout)	River Severn Cause i	Oct/Nov 2000	EA CFMP Final Report June 2005	
B7	Sabrina Drive, Bewdley	River Severn (right bank) Cause i	9 th November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	3 properties flooded
B8	Riverside North, Bewdley	River Severn (left bank) Cause i	9 th November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	4 properties flooded
B9	Stourport Road, Bewdley	River Severn (left bank) [5.16m total] Cause i	9 th November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006 EA Upper Severn Gaugeboard Data	6 properties flooded
B10	Sevenside North, Bewdley	River Severn (right bank) [5.16m total] Cause i	9 th November 2000 February 2002 (RP 5-10yrs) New Year 2003 (minor event)	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006; EA CFMP Final Report June 2005 EA Bewdley Flood Alleviation Scheme EA Upper Severn Gaugeboard Data	40 properties flooded in 2000; Demountable defences erected in 2002 and prevented flooding; Demountable defences erected in 2003 although flood waters not reach them Section of stone quay wall collapsed
B11	Sevenside	River	9 th November 2000	EA Fluvial	69 properties flooded

	South	Severn (right bank) [5.16m total] Cause i		Severn Flood Risk Management Strategy Final Report Oct 2006 EA Upper Severn Gaugeboard Data	
B12	Acacia Avenue	River Severn (left bank) [5.16 total] Cause i	9 th November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006 EA Upper Severn Gaugeboard Data	1 property flooded
B13	Bewdley (Unspecified)	River Severn [5.31m] Cause i	13 th December 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	
B14	Bewdley (Unspecified)	River Severn 4.9m Cause i	7 th February 2004	EA CFMP Final Report June 2005, EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	Lower magnitude than Oct/Nov 2000; 160 properties and 53 chalets (Bewdley and Shrewsbury areas); Demountable defences erected and prevented property flooding (40)
B15	High Street, Lax Lane and Severnside South	Snuffmill Brook Overtopping of blocked culvert causing 4 ft fast flowing water Cause i,iii	19 th -21 st June 2007	Flooding Survey, Wyre Forest District Council, March 1997	8 Properties and 3/4 gardens. 8 families and 2 high risk elderly persons relocated

B16	Wribbenhall - Queensway	Sewage and storm water overflow Cause iv	19 th -21 st June 2007	Flooding Survey, Wyre Forest District Council, March 1997	54 properties affected, 3 evacuated
B17	Sevenside North and Dog Lane	Flash flooding and sewer failure Cause iv	19 th -21 st June 2007	Flooding Survey, Wyre Forest District Council, March 1997; Flooding Summary for RFDC	Sand bags issued by EA and County Council Highways
B18	Bewdley (Unspecified)	River Severn Cause i Led to landslip on Northwood Lane	20 th -25 th July 2007	Wyre Forest District Council Cabinet Meeting Interim Report 30 th August 2007	Defences erected but did not get wet 5 properties evacuated due to landslip
B19	Wribbenhall	Riddings Brook Cause i, iii	19 th -20 th June 2007	Flooding Summary for RFDC Anecdotal evidence	70 properties flooded
B20	Dowles	Dowles Brook Cause i	19 th -20 th June 2007 20 th -25 th July 2007	WFDC Drainage Engineer	Flooding exacerbated due to a series of blockages caused by trees and debris
B21	Part of Long Bank	Flash flooding and sewer failure Cause i and Cause iii	19 th -21 st June	Flooding Survey, Wyre Forest District Council, March 1997	Sand bags issued by EA and County Council Highways
B22	B4194 Near Ribblesford	River Severn	Regularly Most Severe: 1946, 1947, 1960, 1965 Less Severe: 1990, 1993, 1995	Flooding Survey, Wyre Forest District Council, March 1997	Road situated beside river in floodplain
B23	Trimpley	River Severn Cause i	Historically	Flooding Survey, Wyre Forest District Council, March 1997	38 holiday chalets liable to flood (lowest chalet frequency 1 in 5 years) No proposed works

Notes

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4. Causes of flooding
 - i. Overflow of watercourses and existing flood defences including water retention facilities such as flood storage reservoirs / washlands and storm water balancing ponds;
 - ii. Breaching of flood defences (including flood storage areas)

- iii. Mechanical, structural or operational failure (including due to blockages) or hydraulic structures, pumps etc;
- iv. Localised surface water flooding (including sewer flooding and overland flooding);
- v. Functional Floodplains or Washlands; and
- vi. Groundwater flooding.

Table B3 - Historic Flooding Records from watercourses within Stourport-on-Severn

ID	Location ¹	Watercourse and Cause ²	Dates	Source	Comments
S1	Lichfield Street, Stourport	Storm water off highway Cause iv	19 th -21 st June 2007	Flooding Survey, Wyre Forest District Council, March 1997	8 properties affected; Only advice given
S2	Stourport-on-Severn (Unspecified)	River Severn Cause i	1947	CFMP Final Report June 2005, Appendix E	
S3	Stourport-on-Severn (Unspecified)	River Severn Cause i	Historically	Flooding Survey, Wyre Forest District Council, March 1997	10 residential, industrial and tourist properties at risk – built on floodplain. Depth of 500-1000mm in 1 in 10 year flood event
S4	Bridge Street	River Severn (right bank) Cause i	November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	500 caravans and industrial area flooded
S5	Mart Lane	River Severn (left bank) Cause i	November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	
S6	Lower Heath	River Severn (left bank) Cause i	November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	
S7	Sandy Lane Industrial Estate	River Severn (left bank) 5.17m above guageboard datum Cause i	November 2000	EA Fluvial Severn Flood Risk Management Strategy Final Report Oct 2006	
S8	Cedar Close	River Severn Surface water flooding	19 th -21 st June 2007	Wyre Forest District Council Cabinet Meeting Interim Report 30 th August	

		from drains Cause iv		2007	their homes
S9	Stourport (Unspecified)	River Stour Cause i & Cause iv	20 th -25 th July 2007	Wyre Forest District Council Cabinet Meeting Interim Report 30 th August 2007	Residential properties and businesses Infrastructure affected and Riverside meadows, inc car parks, attractions and toilets under water for 4 weeks
S10	Astley Cross	Tributary of River Severn	Sep/Oct 1988 & Apr, Jul and Dec 1989	Flooding Survey, Wyre Forest District Council, March 1997	5 residential properties affected by flooding to a depth of < 150mm; Culvert constructed in 1988 but damaged and inadequate capacity for 1 in 100yr flood; Works have never been carried out.
S11	Mill Road	Runoff from new housing estate	19 th -21 st June 2007 20 th -25 th July 2007	WFDC Drainage Engineer	
S12	Mill Close	High groundwater levels resulting in saturated gardens	Ongoing	WFDC Drainage Engineer	
S13	Staffordshire and Worcestersh ire Canal	Cause iii	June / July 2007	British Waterways	Caused by Main River water entering canal system.

Notes

5. The above is not an exhaustive list of flooding records.
6. Causes of flooding
 - i. Overflow of watercourses and existing flood defences including water retention facilities such as flood storage reservoirs / washlands and storm water balancing ponds;
 - ii. Breaching of flood defences (including flood storage areas)
 - iii. Mechanical, structural or operational failure (including due to blockages) or hydraulic structures, pumps etc;
 - iv. Localised surface water flooding (including sewer flooding and overland flooding);
 - v. Functional Floodplains or Washlands; and
 - vi. Groundwater flooding.

Table B4 - Historic Flooding Records from watercourses within Other Areas

ID	Location ¹	Watercourse and Cause ²	Dates	Source	Comments
O1	Mill Lane, Blakedown	Blakedown Brook Cause i	Frequent Intervals each Winter	Flooding Survey, Wyre Forest District Council, March 1997	Periods <12 hours, 0.3m Remedial works would require training the brook back to its old branch downstream and excavating to give a design discharge of 1.5cumecs. New length of culvert has been constructed from SO 876 784 to SO 877 787
O2	Hillpool, Drayton, Dorhall and Woodrow, Chaddesley Corbett	Barnett Brook Cause iv	Historically	Flooding Survey, Wyre Forest District Council, March 1997	Excess water affects roads, land and property. Highway drainage problem
O3	Kingsford – gardens and agricultural land	Tributary of River Stour	Frequently	Flooding Survey, Wyre Forest District Council, March 1997	Requires tree clearance and channel resectioning
O4	Wolverley	River Stour & unnamed tributary	Historically 20 th -25 th July 2007	Flooding Survey, Wyre Forest District Council, March 1997; Wyre Forest District Council Cabinet Meeting Interim Report 30 th August 2007	3 residential and light commercial properties at risk from raised water levels.
O5	Cookley	River Stour	Historically 20 th -25 th July 2007	Flooding Survey, Wyre Forest District Council, March 1997; Wyre Forest District Council Cabinet Meeting Interim Report 30 th	Residential property and steel works situated on low lying land adjacent to the watercourse

				August 2007	
O6	A456 - Blakedown near viaduct	Cause i and Cause iv	Jan, May, June, July 2007; April, May, Nov, Sep, Oct, Dec 2006; March, Dec, May, June, July, Oct, Nov 2005; Jan, April, May, Aug, Sep 2004; April, May, June, Oct, Dec 2003	Highways Agency	A number of incidents have been attributed to blocked drains and gullies
O7	Dick Brook	Cause i	June / July 2007	Anecdotal evidence	Flood risk exacerbated by series of dams caused by channel blockages due to significant debris within the channel.

Notes

7. The above is not an exhaustive list of flooding records.
8. Causes of flooding
 - i. Overflow of watercourses and existing flood defences including water retention facilities such as flood storage reservoirs / washlands and storm water balancing ponds;
 - ii. Breaching of flood defences (including flood storage areas)
 - iii. Mechanical, structural or operational failure (including due to blockages) or hydraulic structures, pumps etc;
 - iv. Localised surface water flooding (including sewer flooding and overland flooding);
 - v. Functional Floodplains or Washlands; and
 - vi. Groundwater flooding.