

## Appendix B Hydrological Data and Analysis

### B-1 Well Inventory

Ref	Address	Owner / contact	Easting	Northing	GL	WellTop	Depth	Dia	Stick-up
					mAOD	mAOD	m bWT	mm	WT-GLm
1	Riverdale. London Road	Kevin Wigham	415557	200928	83.90	83.90	1.90	700	0.00
2	2 Eastbourne Terrace	Jason Baker	415518	200924	83.90	83.90	-	-	0.00
3	Colosseo Restaurant, London Rd	Sous Guenaoua	415223	200970	83.65	84.40	2.85	-	0.75
4	Comrie [Dovecote House]	Mr&Mrs deCourcy-Ireland	415387	201183	86.20	86.75	4.32	780	0.55
5	Moor Farm	Margaret Bishop	415870	200855	83.00	83.00	1.34	-	0.00
6	Well House, 2 Coronation Street	-	414756	200928	88.00	88.00	-	-	0.00
7	Coln Ho Reform School -front yard	GCC	414767	200910	87.00	87.00	4.33	800	0.00
8	Borehole A2	FTC	414911	200812	87.30	87.30	6.70	50	0.00
9	Borehole B2 [backfilled]	FTC	415908	201604	91.20	91.20	4.47	50	0.00
10	Borehole B5	FTC	415704	201675	94.00	94.00	4.10	50	0.00
11	Thornhill Farm	New owner	418080	200520	80.30	80.30	8.84	950	0.00
12	Cinder Lane observation BH	Environment Agency	416118	200900	83.31	83.95	4.60	200	0.64

Ref	GL	WellTop	Depth	Dia	Stick-up	Monitoring in 2018: RWL in metres bgl						
	mAOD	mAOD	m bWT	mm	WT-GLm	20-Mar	17-Apr	25-May	06-Jun	17-Jul	09-Aug	25-Aug
1	83.90	83.90	1.90	700	0.00	1.030	1.030	1.264	1.200	1.600	1.980	1.640
2	83.90	83.90	-	-	0.00	-	-	-	-	-	-	-
3	83.65	84.40	2.85	-	0.75	1.560	1.575	1.820	1.675	2.130	2.090	2.110
4	86.20	86.75	4.32	780	0.55	2.130	2.680	3.960	3.690	4.400	4.400	4.400
5	83.00	83.00	1.34	-	0.00	dry	-	-	-	-	-	-
6	88.00	88.00	-	-	0.00	-	-	-	-	-	-	-
7	87.00	87.00	4.33	800	0.00	-	-	-	-	1.895	-	1.730
8	87.30	87.30	6.70	50	0.00	2.680	2.740	3.183	3.060	3.820	4.100	4.130
9												
10	94.00	94.00	4.10	50	0.00	-	-	-	-	-	-	-
11	80.30	80.30	8.84	950	0.00	-	0.820	-	-	-	-	-
12	83.31	83.95	4.60	200	0.64	3.00	-	-	-	-	-	-

Ref	Address	Location	Access	Condition. Dipping Point
1	Riverdale. London Road	Rear west of property	Steel manhole cover	manhole cover [edge]
2	2 Eastbourne Terrace	In sitting room	Removable glass plate	
3	Colosseo Restaurant, London Rd	Behind bar	Removable wooden cover	Top of well, bar side
4	Comrie [Dovecote House]	In garden	Walled and grilled but open	max WL 1m bwh. Top of well, south side
5	Moor Farm	In garden by wall	Steel manhole cover	dry, part full of sand
6	Well House, 2 Coronation Street	Inaccessible	Located inside the house	-
7	Coln Ho Reform School -front yard	No opening in well-head	Concrete caisson	
8	Borehole A2	Rugby Club field	14mm socket wrench	New: Top of casing
10	Borehole B5	Woodland on Lovers Lane	Allen key	
11	Thornhill Farm	Inside the main farm bdg	Glass cover in kitchen floor	Recently cleaned out max WL 0.41m below kitchen floor
12	Cinder Lane observation BH	Corner of Football ground	Through FTC gate	Good. Top of casing



**B-2 GeolIndex Archive**

Id	Location Id	Depth [m]	Built	Aquifer	East	North	Start	Contin	End
SP10/24	Fairford Deer Park	2.5	1941	Alluvium	414980	202290	-		-
SP10/85	Fairford Burcotts	79.0	1982	Great Oolite Formation	414330	200590	-		-
SP10/52	Horcutt Lane Fairford	35.8	1924	Great Oolite Group	414800	200900	-		-
SP10/100	Fairford Chapel Electronics	4.0		River Terrace Deposits	416720	200980	-		-
SP10/105	Fairford Football Club	4.6	2002	River Terrace Deposits	416119	200903	-		-
SP10/31	Thornhill Farm Fairford	30.5	1955	Great Oolite Formation	418080	200510	-		-
SP10/46	Pittam Boring Quenington	39.9	1935	Great Oolite Formation	414190	203310	-		-
SP10/104	Leafield Farm Quenington	75.0	1996	Great Oolite Formation	415580	203900	-		-
SP10/80	Barrow Elm Cottage	3.4		Cornbrash Formation	416710	203900	-		-
SP10/103	Milton Farm, Fairford	75.0	1995	Great Oolite Formation	414250	202240	-		-
SP10/5B	H.J.Godwins Works Quenington	38.1	1933	Great Oolite Formation	414330	204360	-		-
SP10/45	E.Of Crossroads Cottages Quenington	30.5	1929	Great Oolite Formation	413700	204100	-		-
SP10/70	Mawley Farm Quenington	76.2	1961	Inferior Oolite Group	413450	203930	-		-
SP10/84	Donkeywell Farm Quenington	106.7		Great Oolite Group	412840	203420	-		-
SP10/54	Donkey Well Buildings	97.5	1973	Inferior Oolite Group	412750	203400	1973	1973	1980
SP10/4	Donkeywell Buildings	45.7		Great Oolite Formation	412710	203410	1963	1963	1980
SP10/23	Honeycombe Leaze Quenington	44.2	1925	Great Oolite Formation	412690	202280	-		-
SP10/102	Homleaze Farm Hatherop	58.0		Great Oolite Formation	417400	204300	-		-
SP10/1	South Farm Quenington	25.6	1935	Great Oolite Formation	417140	203100	-		-
SP10/2	South Farm Southrop	34.1	1954	Great Oolite Formation	417760	202530	1954	1975	1980
SP10/26	Southrop Manor Lechlade	31.7	1949	Great Oolite Formation	419530	202490	1949	1975	1977
SP10/60	Stanford Hall Lechlade	54.9	1946	Great Oolite Formation	419090	202030	-		-
SP10/25	Stanford Hall	54.9		Great Oolite Group	418960	202000	-		-
SP10/65	Waitenhill House Fairford	66.0	1954	Great Oolite Formation	413030	200400	-		-
SU19/3	Marston Hill Farm			Unknown	412940	199800	-		-
SU19/4	Marston Hill Farm	35.1	1949	Multiple Aquifers	412930	199820	-		-
SP10/28B	Magpies Farm, Meysey Hampton	18.3	1930	Great Oolite Group	412840	200370	-		-
SP10/28A	The Three Magpies Marston Maisey	15.2	1930	Great Oolite Formation	412680	200370	-		-
SU19/38	Manor House Meysey Hampton	4.6		River Terrace Deposits	411920	199860	-		-
SU19/32A	The Old Rectory Meysey Hampton	29.3	1935	Cornbrash Formation	411800	199850	-		-
SU19/32B	The Old Rectory Meysey Hampton	21.9	1937	Forest Marble Formation	411730	199900	-		-
SU19/30	Manor Farm Meysey Hampton	27.4	1945	Forest Marble Formation	411700	199970	-		-
SU19/78	The New Rectory Meysey Hampton	28.2	1935	Forest Marble Formation	411650	199990	-		-

**B-3 Rainfall Data****Appendix B-3-1 List of Rainfall Stations in the Vicinity of Fairford**

RAIN_NO	STN_NAME	EASTING	NORTHING	ELEVATION	FIRSTYEAR	MACHDATA	LAST YEAR	FREQ_OBS
248128	Cirencester, Royal Ag.Coll.	4002	2013	135	1875	1882	1915	
248113	Cirencester	4003	2011	133	1951	1961		daily
248300	Somerford Keynes, Manor Ho.	4016	1955	91	1925		1945	
249124	Stratton	4016	2037	131	1968	1968	1969	
249150	Cirencester, Cripp's Mead	4019	2023	111	1902		1922	
249134	Cirencester, The Firs	4019	2031	107	1870		1884	
249145	Cirencester, Chesterton Grove	4022	2009	123	1956	1957	1986	daily
249142	Cirencester, Somerford Rd	4022	2012	115	1941	1941	1956	
249159	Cirencester, Dollarward Ho.	4022	2021	111	1890		1924	
249147	Cirencester, Chesterton Lane Mter	4026	2010	100	1980	1981	1983	daily
249141	Cirencester, Gwynfa	4028	2017	108	1923	1923	1941	
248332	Shornote S.Wks Auto.Sta.	4034	1971	94	1993			daily
249175	South Cerney Met.Office	4050	1993	111	1965	1965	1967	
249515	Waterton House	4065	2013	110	1939		1952	
249447	Barnsley	4077	2051	133	1996	1996		daily
250791	Bibury, Furzey Barn Farm Mter	4110	2050	145	1977	1978	1983	daily
250123	Kempsford	4148	1972	79	1863	1875		daily
250849	Fairford	4152	2012	90	1996	1996		daily
250198	Fairford Met.Office	4158	1990	82	1968	1968	1977	daily
250858	Fairford S.T.W.	4158	2003	99	1991	1991	1996	daily
250965	Claydon House	4192	2001	76	1892		1951	
251281	Sevenhampton	4207	1904	91	1990	1990		daily
251529	Lechlade, St John's Lock	4222	1990	72	1913	1913		daily
251530	Lechlade, St John's Lock Auto.Sta.	4222	1990	72	1993			daily
252265	Holwell	4233	2091	130	1969	1971	1973	
252055	Broughton Poggs	4234	2038	84	1920		1950	
251898	Kelmscott	4245	1993	70	1930	1951	1972	
251422	Great Coxwell	4269	1939	116	1952	1958	1975	daily
252460	Brize Norton, Met.Office	4289	2060	84	1968	1968	1969	
252448	Brize Norton Met.Office	4292	2067	81	1969	1970		daily
252449	Brize Norton, Met.Office Sser	4292	2067	81	1971	1979		daily
252450	Brize Norton Samos	4292	2067	81	1995	1995		daily
252473	Bampton	4310	2029	70	1956	1969		daily



**Appendix B-3-2 Monthly Rainfall [mm] at Lechlade, 1913-2018**

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1913	82.0	26.3	65.7	78.7	46.0	13.0	41.2	18.6	57.3	73.6	53.1	24.8	580.3
1914	9.6	50.1	89.6	21.0	23.3	48.5	80.1	45.6	22.4	52.2	107.4	117.4	667.2
1915	73.7	64.2	26.0	23.1	77.8	22.9	95.8	71.4	40.7	90.5	19.0	109.3	714.4
1916	30.0	92.8	96.8	22.3	46.2	41.2	27.4	90.0	23.9	111.2	69.7	84.0	735.5
1917	27.0	28.5	51.4	27.7	68.7	79.4	72.2	123.9	46.4	88.8	21.0	33.5	668.5
1918	66.3	31.7	21.4	74.5	47.1	17.8	93.4	40.2	112.0	35.2	44.5	57.6	641.7
1919	73.7	58.6	97.6	47.8	19.8	43.3	54.8	61.8	40.4	33.5	30.3	97.7	659.3
1920	54.8	17.6	43.7	117.9	78.4	59.8	115.3	22.5	35.9	65.9	15.3	47.3	674.4
1921	57.3	10.9	24.7	26.4	34.6	10.8	4.6	30.4	40.6	36.4	47.8	34.1	358.6
1922	51.2	67.8	50.3	67.5	25.5	38.3	89.5	103.3	31.8	19.0	34.3	67.6	646.1
1923	33.2	89.4	53.1	48.5	26.6	7.5	38.3	56.5	63.0	101.7	25.9	70.0	613.7
1924-1930 missing													
1931	34.9	44.7	4.1	74.9	113.5	88.6	75.3	75.0	38.8	16.8	81.9	29.1	677.6
1932	52.9	3.1	47.2	66.5	153.2	23.8	76.0	33.0	83.1	118.5	41.3	16.3	714.9
1933	41.8	80.9	70.5	32.8	29.3	52.9	41.7	34.9	82.1	54.4	18.2	11.9	551.4
1934	47.3	4.9	43.5	54.1	18.7	36.9	36.9	35.9	38.4	35.5	43.4	121.6	517.1
1935	13.9	49.3	11.5	87.8	36.9	90.1	17.3	41.0	112.5	112.1	118.4	75.0	765.8
1936	75.1	43.8	47.6	26.7	15.1	51.0	114.4	8.7	63.0	41.0	75.0	65.8	627.2
1937	89.9	116.3	63.2	76.7	63.2	41.4	46.3	13.8	50.6	84.5	31.1	47.7	724.7
1938	71.1	21.3	6.4	1.4	45.7	28.1	42.8	96.0	70.5	80.6	70.7	59.1	593.7
1939	114.9	24.9	36.0	82.6	34.2	48.8	124.2	40.0	40.3	99.1	117.2	44.6	806.8
1940	73.0	50.8	53.6	44.7	47.3	15.3	73.7	2.4	27.7	68.5	182.6	30.0	669.6
1941	73.3	64.6	73.1	25.7	31.4	46.3	55.8	85.1	18.8	37.4	63.2	43.0	617.7
1942	80.1	19.2	53.0	27.3	111.8	5.9	46.4	85.3	41.2	81.5	53.8	92.4	697.9
1943	110.3	23.6	27.0	17.7	65.7	40.9	31.3	56.7	28.8	73.7	42.1	24.7	542.5
1944	42.6	22.9	8.6	46.5	15.7	42.3	54.6	47.2	61.9	88.4	112.3	37.7	580.7
1945	44.7	52.2	22.9	26.8	58.9	84.5	48.5	57.8	40.6	84.9	6.8	92.3	620.9
1946	48.3	59.5	23.4	39.4	89.0	73.9	25.8	128.6	76.7	25.0	125.0	42.8	757.4
1947	36.3	33.9	158.0	61.2	40.6	35.8	58.7	11.3	35.0	9.9	35.9	49.5	566.1
1948	128.8	27.6	23.6	51.5	105.8	42.1	30.6	91.2	51.7	71.3	40.3	88.0	752.5
1949	27.3	24.9	38.2	36.1	63.7	11.0	71.7	44.3	51.4	145.3	75.6	29.0	618.5
1950	11.3	113.3	25.0	50.7	63.7	39.2	99.2	84.2	87.7	15.9	123.3	41.7	755.2
1951	70.7	89.2	96.6	63.4	64.1	30.3	24.1	124.9	77.5	28.6	139.3	51.9	860.6
1952	44.9	12.5	62.5	42.2	69.1	39.7	7.6	134.9	24.9	103.9	96.2	54.5	692.9
1953	18.1	30.3	24.9	42.5	43.1	35.8	65.6	75.8	56.6	74.2	27.0	15.8	509.7
1954	37.0	59.7	61.1	6.9	48.2	92.7	46.0	90.7	56.7	58.9	120.5	47.5	725.9
1955	57.0	39.2	36.4	12.2	103.1	74.1	5.9	16.0	18.2	37.1	34.8	77.4	511.4
1956	88.6	4.2	9.2	43.6	6.2	60.2	55.9	114.6	99.3	54.2	20.7	113.6	670.3
1957	52.0	85.2	58.4	8.5	43.3	39.2	62.8	84.4	77.4	52.0	45.7	48.7	657.6
1958	72.7	84.1	28.8	20.2	63.1	99.4	63.5	82.1	89.5	63.8	68.5	91.0	826.7
1959	101.2	2.1	74.4	67.5	18.3	23.7	47.0	61.0	6.6	41.2	44.1	130.8	617.9
1960	102.3	53.2	30.2	22.7	40.0	94.7	85.8	67.4	95.5	145.2	118.3	104.3	959.6
1961	84.7	71.0	3.1	89.1	28.6	38.4	57.5	43.6	60.5	72.0	33.0	113.4	694.9
1962	92.3	10.7	35.6	55.7	53.0	7.4	53.2	103.3	95.6	21.3	54.0	61.4	643.5
1963	28.8	8.3	94.2	64.0	44.9	90.9	45.0	68.7	47.2	49.9	133.3	23.6	698.8
1964	16.3	26.0	91.1	61.1	68.2	65.7	21.3	19.0	23.9	33.7	44.7	54.6	525.6
1965	66.3	4.1	55.0	44.6	77.7	71.2	76.2	46.3	82.5	15.8	75.3	122.1	737.1
1966	39.7	106.1	12.5	100.4	50.6	42.4	68.6	82.8	42.7	148.0	42.6	76.2	812.6
1967	42.9	93.5	40.9	34.2	124.4	40.5	43.2	51.3	73.8	150.3	35.8	68.0	798.8
1968	69.4	31.9	23.7	60.2	64.9	95.7	141.3	67.5	109.2	65.4	51.3	71.4	851.9
1969	59.7	45.7	54.5	29.3	122.8	18.5	46.6	91.6	29.2	7.8	60.4	61.5	627.6
1970	65.8	43.2	46.3	58.1	28.4	63.5	53.7	108.9	42.7	22.0	126.8	27.8	687.2
1971	111.3	24.3	43.1	69.1	44.2	122.7	6.3	74.6	22.2	91.8	56.8	31.7	698.1
1972	55.7	55.6	59.8	55.6	76.7	34.1	32.7	14.1	32.4	20.7	46.1	85.7	569.2
1973	27.4	15.1	11.4	51.5	53.8	98.0	70.1	28.4	43.2	28.2	29.5	31.2	487.8
1974	79.1	76.7	31.5	7.5	24.8	51.7	33.4	78.5	117.6	49.8	69.4	36.8	656.8
1975	80.1	37.6	73.9	30.7	30.0	10.7	55.7	26.1	87.1	13.0	38.5	23.2	506.6
1976	18.4	19.1	24.2	10.1	31.2	22.6	53.7	26.9	104.5	106.7	51.2	85.5	554.1



YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	
1977	64.5	114.3	51.9	37.2	42.8	102.9	8.1	147.2	11.6	35.0	47.9	62.1	725.5	
1978	63.1	38.8	44.2	45.9	24.5	31.3	89.9	30.2	19.8	4.4	20.6	99.4	512.1	
1979	40.3	42.9	87.8	41.6	118.2	37.3	13.5	71.5	13.8	44.7	49.4	110.5	671.5	
1980	36.3	46.4	80.9	17.2	19.6	87.1	52.2	80.8	60.6	62.2	41.8	36.2	621.3	
1981	30.1	20.6	114.1	30.8	84.9	40.4	47.4	40.2	113.8	67.8	35.9	84.4	710.4	
1982	54.5	39.3	82.2	25.8	13.4	72.8	27.7	33.5	64.1	75.8	84.7	61.5	635.3	
1983	45.8	14.0	42.2	82.4	103.0	15.3	47.1	15.3	54.7	42.1	35.6	52.4	549.9	
1984	97.7	30.2	38.5	1.0	76.5	25.2	12.5	27.0	74.9	48.9	127.4	45.8	605.6	
1985	46.0	43.0	55.6	25.7	105.9	107.7	40.9	94.1	13.6	31.8	37.9	100.9	703.1	
1986	72.6	7.8	57.8	60.5	64.7	16.1	33.6	77.5	30.9	65.0	86.8	69.5	642.8	
1987	10.4	48.5	57.0	57.3	35.6	98.2	36.4	30.6	38.0	138.7	63.4	34.1	648.2	
1988	100.1	42.4	53.8	27.8	43.3	55.2	96.7	50.4	43.1	55.3	27.0	14.6	609.7	
1989	30.8	61.5	46.8	64.0	9.5	37.5	37.8	38.7	34.7	71.2	45.2	129.6	607.3	
1990	62.6	83.0	15.9	26.5	5.3	41.4	17.1	29.5	31.4	49.7	26.3	59.7	448.4	
1991	69.5	21.5	62.1	55.3	9.8	79.7	62.5	2.0	55.5	38.6	62.5	12.9	531.9	
1992	32.6	22.4	38.8	48.4	45.0	35.3	97.4	101.8	85.2	65.0	131.8	53.5	757.2	
1993	73.9	4.1	27.3	58.9	126.7	49.0	55.1	26.9	59.1	89.0	36.2	94.3	700.5	
1994	85.3	58.4	38.5	43.2	83.9	12.9	34.7	39.9	64.3	55.4	51.9	76.6	645.0	
1995	110.7	72.2	36.5	20.0	46.5	8.3	13.2	1.1	142.2	48.9	61.7	98.4	659.7	
1996	33.4	58.3	33.5	51.3	27.7	32.2	24.6	71.3	24.2	42.7	67.7	21.1	488.0	
1997	7.2	70.2	10.9	22.9	52.1	64.3	15.2	105.5	12.2	50.3	75.7	65.6	552.1	
1998	67.7	9.7	63.1	109.7	45.2	98.1	24.0	27.4	-	113.4	60.1	73.9	692.3	
1999	104.9	26.6	32.3	53.4	68.8	79.2	2.7	97.9	96.3	58.7	42.9	84.4	748.1	
2000	18.6	75.2	14.2	147.3	82.0	41.7	23.8	64.4	92.7	110.4	97.7	109.8	877.8	
2001	58.7	71.5	75.7	77.3	33.3	28.2	58.7	96.6	20.2	69.4	33.4	20.3	643.3	
2002	67.4	77.6	35.2	47.1	66.7	50.5	131.0	37.3	16.7	126.2	116.8	101.7	874.2	
2003	71.8	20.4	25.3	38.7	55.7	38.2	64.2	11.7	14.3	27.4	86.5	78.5	532.7	
2004	77.3	30.6	43.7	74.1	47.6	35.9	46.4	140.6	34.4	127.1	34.2	52.0	743.9	
2005	28.7	17.8	55.9	56.5	38.1	56.6	54.8	40.8	40.9	65.8	51.3	61.4	568.6	
2006	19.9	31.8	71.7	30.3	94.6	8.4	74.1	32.8	117.4	66.1	113.3	89.2	749.6	
2007	90.5	82.9	55.7	3.5	111.8	107.8	176.1	43.6	20.1	83.4	51.3	89.9	916.6	
2008	106.9	21.6	73.9	33.7	106.8	84.3	118.0	91.2	82.3	38.3	80.0	39.4	876.4	
2009	58.9	-	22.9	43.5	40.1	47.2	84.1	60.2	7.4	54.3	117.7	74.4	610.7	
2010	67.0	54.7	49.7	23.2	27.6	27.2	23.4	128.0	32.3	46.8	55.6	25.2	560.7	
2011	56.0	-	11.0	2.9	32.1	51.4	37.5	52.2	40.9	30.4	30.9	91.7	437.0	
2012	50.8	27.7	22.9	123.1	50.5	151.6	75.3	95.4	66.8	84.5	114.3	129.5	992.4	
2013	81.2	38.9	65.8	24.1	56.0	20.9	37.0	20.3	48.5	96.1	54.8	118.5	662.1	
2014	157.1	105.8	30.0	58.5	Data missing		25.4	75.4	20.3	67.5	97.1	56.9	694.0	
2015	79.3	41.4	21.6	17.1	59.2	22.7	75.0	57.7	32.4	46.3	92.3	-	545.0	
2016	74.2	65.3	75.9	71.9	-	74.4	11.3	58.4	45.2	14.4	91.7	21.6	604.3	
2017	69.1	31.3	40.2	6.5	72.6	29.0	79.6	41.4	47.6	21.9	52.2	97.3	588.7	
2018	66.1	25.8	93.5	50.8	62.4								Data missing	298.6
min	7.2	2.1	3.1	1.0	5.3	5.9	2.7	1.1	6.6	4.4	6.8	11.9	358.6	
max	157.1	116.3	158.0	147.3	153.2	151.6	176.1	147.2	142.2	150.3	182.6	130.8	992.4	
Mean	60.6	44.8	47.4	46.2	55.8	50.0	54.0	60.3	53.2	62.6	64.1	64.9	659.6	