

Haywood Waterworks
nr. Manchester

40

C C Bowley Esq:

+ ground + Sea Level 900 ft

YEAR - -		1848	1849	MEANS.
January - -		4.60	8.55	
February - -		9.40	2.62	
March - - -		4.80	.90	
April - - -		2.35	2.16	
May - - -		1.45	2.75	
June - - -		7.90	3.27	
July - - -		5.15	5.00	
August - - -		7.60	4.47	
September -		4.15	5.52	
October - -		8.40	6.85	
November -		3.10	5.33	
December -		4.55	4.48	
TOTALS -		63.45	57.90	

Heywood Waterworks

at Manchester

C C Basley Esq

+ ground

+ sea level 900 ft.

YEAR - -	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	MEANS.
January - -	4.27	5.62	5.16	3.93	4.14	.52	3.55	3.05	2.03	2.72	
February - -	4.59	5.38	4.89	1.50	2.66	.70	4.24	2.18	0.03	2.76	
March - - -	1.07	5.03	.39	1.10	1.60	2.71	.38	2.60	1.55	3.79	
April - - -	4.36	1.48	.32	2.72	.93	1.20	3.18	2.50	2.72	3.25	
May - - -	2.73	1.65	2.17	.73	2.48	1.45	3.85	2.40	2.39	.60	
June - - -	2.98	2.97	5.71	5.06	2.78	4.55	3.67	3.04	2.57	2.00	
July - - -	4.20	5.49	3.31	5.43	2.83	4.29	2.89	4.00	2.82	2.05	
August - -	6.94	4.01	5.35	5.62	2.98	3.99	6.39	6.26	3.64	7.40	
September -	2.96	2.16	2.95	3.34	3.03	1.25	5.71	3.25	5.05	5.88	
October - -	4.49	6.50	5.21	4.66	3.40	6.87	2.45	1.68	4.69	3.40	
November -	6.50	.19	7.43	4.58	3.69	1.39	2.69	2.55	2.47	3.00	
December -	2.79	-	6.83	.86	6.22	1.67	3.64	2.65	4.68	4.00	
TOTALS -	47.88		49.72	39.53	36.74	30.59	42.64	36.16	34.61	40.85	

The gauge is situated on the Easterly slope of the Valley of Norden Brook which is a tributary to the River Roch. The brook rises in the ridge of hills between Rochdale & Haslingden its general direction being from N.E.S. The hills rise on both sides to a height 500 or 600 ft. above the bottom of the stream within a distance of half a mile.

Hagden Dene
Haywood Waterworks Works
W. Manchester

C C Basley

5 in + ground = 1.6 + Sea Level 900 ft

YEAR - -	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	MEANS.
January - -	3.53	.20	3.44	4.85	3.90	3.06	5.79	3.16	2.74	2.56	3.323
February - -	1.40	4.55	.80	2.16	3.50	2.23	5.34	3.80	2.72	4.71	3.121
March - - -	4.42	5.15	4.57	1.20	3.00	.77	1.96	1.48	3.50	1.11	2.916
April - - -	1.68	.28	3.40	1.36	1.46	1.62	1.48	5.35	1.73	2.54	2.090
May - - -	4.85	1.13	5.70	1.64	1.38	1.76	1.74	2.32	1.11	3.63	2.528
June - - -	5.41	3.05	4.62	5.00	2.74	.17	7.83	2.20	.04	1.26	3.232
July - - -	2.73	4.50	5.77	1.16	3.71	2.95	4.59	5.82	.15	1.50	3.289
August - -	6.55	3.40	3.05	5.77	2.28	5.05	8.83	2.80	3.62	1.87	4.355
September -	3.40	6.31	4.43	8.04	2.12	.54	10.44	3.93	2.12	7.81	4.914
October - -	5.65	1.30	6.68	7.25	5.90	6.21	5.65	4.53	6.50	4.45	5.412
November -	5.40	6.00	1.85	3.92	2.50	3.52	10.53	2.74	3.28	5.31	4.505
December -	1.10	3.00	5.55	3.90	4.77	1.53	9.53	2.74	9.00	5.38	4.650
TOTALS -	46.12	38.87	49.86	46.25	37.26	30.21	73.24	40.87	36.51	42.13	44.132

C C C C R C + C C C C

Ord. Map 88 NW & SW, 4 m N of Haywood is Knole Hill
of which is the stream on the E side of whose valley
is Hagden Dene.

RAINFALL AT Rochdale Norden Lane

Lat..... Long..... County of Lancashire
 Rain Gauge, by..... Observer Mr. E. L. Hawley Esq: M.P.

Diameter5	'									
Height	1	'									
Altitude	900	'									
YEAR	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	MEANS.
January.....	2.39	1.50	5.95	4.77	5.04	5.36	2.45	6.54	4.23	1.14	3.937
February.....	1.90	2.95	6.30	6.64	2.18	1.00	5.21	4.42	1.91	3.16	2.969
March.....	2.55	1.47	4.05	3.03	4.68	8.87	4.43	3.03	1.65	2.03	2.679
April.....	1.91	4.24	2.39	2.8	1.84	1.25	2.73	2.61	1.90	2.20	2.135
May.....	1.40	1.88	2.32	2.27	2.04	2.32	7.43	9.0	4.94	1.68	2.349
June.....	2.08	2.25	7.10	2.20	1.01	5.12	3.96	1.97	3.57	7.28	3.654
July.....	-69	5.27	3.55	4.59	2.44	5.98	4.32	6.43	7.77	5.98	4.002
August.....	2.52	1.28	4.92	6.12	6.09	2.50	4.52	6.13	6.77	6.14	4.699
September.....	3.35	4.68	7.10	3.42	5.43	6.29	5.17	4.14	5.07	3.25	4.790
October.....	7.18	5.22	5.90	7.38	6.41	5.76	3.31	6.48	4.44	3.12	5.720
November.....	4.31	1.66	5.30	3.65	1.89	5.51	3.93	7.71	3.21	1.71	3.888
December.....	2.90	3.25	5.33	1.50	6.68	1.90	7.73	4.19	1.80	3.20	3.848
TOTALS.....	35.18	34.65	60.21	59.87	45.73	43.86	48.50	57.55	40.26	40.89	44.670

C C C

Too small (Oldham Water 09)

RAINFALL AT Rochdale, Norden Dale 80

Lat. _____

Lon. _____ County of Lancashire

Rain Gauge, by _____

Observer H. Dugdale, Esq.Inwell 3

Diameter	5										
Height	1.6										
Altitude	900T									947	
Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	MEANS.
January79	50	3.02	4.72	5.57	2.31	5.08	1.71	1.81	1.95	2.746
February	2.61	5.82	2.91	2.36	2.92	3.46	.74	.82	.52	2.13	2.429
March	3.38	4.78	2.94	.54	2.42	2.55	2.81	2.13	2.02	2.35	2.592
April	1.99	1.82	4.49	1.96	1.29	1.44	2.53	1.38	1.98	2.28	2.116
May	2.69	4.11	1.40	.93	1.49	2.18	5.45	2.07	.71	1.77	2.280
June	3.73	2.26	6.18	5.20	.73	5.42	1.79	.73	2.31	.91	2.926
July	7.13	4.53	6.17	2.68	5.06	1.91	4.16	1.77	6.64	4.59	4.464
August	2.39	6.19	3.09	2.45	3.27	1.82	2.40	1.67	4.58	6.25	3.211
September....	4.86	2.11	2.34	6.63	2.76	6.70	4.28	6.10	1.24	2.95	3.997
October.....	4.24	2.87	4.58	5.52	2.47	6.48	5.64	2.32	1.92	3.77	3.981
November....	4.40	4.79	6.02	4.86	1.32	3.39	3.27	2.17	5.61	1.95	3.778
December....	6.75	3.71	4.04	2.87	5.17	2.06	5.27	2.67	3.03	3.46	3.903
TOTALS	114.96	43.49	47.18	40.72	34.47	39.72	43.42	25.54	32.37	34.36	38.623

1880. Norden

3 miles

South.

Annual value rejected from survey (in £s)

RAINFALL AT Rochdale Norden Dean

Lat.

Lon.

County of Lancashire

Rain Gauge, by

Observer

J. Diggle Esq. CL.

Ulverley - Jewell 30 id gauge

Diameter	5										
Height	1-7										
Altitude	948 ft										
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.
January	4.52	2.39	3.42	1.26	3.43	2.82	1.93	1.55	3.42	5.38	3.012
February41	.24	2.11	4.80	5.13	.31	2.10	2.61	2.38	1.56	2.165
March	3.60	1.18	.97	.79	3.46	3.35	5.00	3.46	1.56	2.30	2.567
April	1.07	2.12	1.17	.62	1.81	2.25	1.54	2.39	2.23	3.53	1.843
May	2.83	2.73	4.14	2.13	3.34	.88	.36	1.39	2.81	2.98	2.359
June	3.26	2.04	3.26	2.91	3.10	2.35	2.76	3.85	2.53	1.59	2.465
July	2.94	3.64	3.41	4.06	3.43	6.02	2.27	1.47	.68	1.55	2.944
August	5.12	8.54	5.50	3.12	4.29	5.19	2.66	4.89	5.77	1.38	4.646
September	2.00	3.67	4.31	4.20	.49	2.11	7.36	4.10	1.19	6.50	2.593
October	2.97	5.39	5.69	4.10	4.90	4.14	4.96	2.20	4.13	3.08	4.166
November	5.79	4.44	3.76	2.85	3.15	3.47	1.59	4.38	2.92	1.24	3.358
December39	7.25	2.45	3.87	3.89	4.33	5.70	4.69	4.18	2.56	3.941
TOTALS	34.90	43.73	40.18	34.71	40.42	37.22	38.23	37.08	33.80	33.65	37.392

1860-

Too small Oldham Water 1909

Annual values rejected from survey, (10 low)

RAINFALL AT Rochdale Nayden Dean Newg

Lat.

Lon.

County of Lancashire

Mersey Jewell 3 New gauge

Rain Gauge, by

Observer

J. Diggle Esq. Cr.

Diameter	5	5									
Height	7	1	3								
Altitude	947	948									
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.
January	4.52	2.72	3.66	1.25	3.54	3.31	2.31	1.69	4.30	6.46	
February	.41	.38	2.31	5.04	5.48	.40	2.53	3.15	3.23	1.70	
March	3.60	1.42	.81	.98	3.77	3.81	5.73	4.18	1.99	2.81	
April	1.07	2.35	1.29	.79	1.94	2.47	1.84	2.99	2.59	4.28	
May	2.83	3.10	4.59	2.32	3.66	1.07	.47	1.84	3.40	3.39	
June	3.26	2.22	3.65	3.23	3.59	2.53	3.32	4.30	3.13	1.82	
July	2.94	4.04	3.77	4.49	4.00	6.51	2.56	1.95	.91	1.90	
August	5.12	9.28	5.92	3.50	5.05	5.95	3.22	5.64	6.84	1.57	
September	2.00	4.11	4.90	4.83	.52	2.30	7.22	4.97	1.39	7.54	
October	2.97	5.66	5.95	4.49	5.10	4.65	5.49	2.51	4.74	3.58	
November	5.79	4.51	3.92	3.50	3.43	3.96	1.68	5.30	3.37	1.52	
December	.39	7.82	2.66	4.05	4.35	4.55	7.22	5.67	5.05	2.69	
TOTALS	33.90	47.61	43.43	38.47	44.43	41.51	43.59	44.19	40.94	39.26	

 1891 Gauge moved June 1st 10 yards NE

Too small Octham water 1909

Annual values rejected from Survey (6 lines)

RAINFALL AT Rochdale Norden Dean

Lat.

Lon.

County of Lancashire South

Gavel 3
No 2

Rain Gauge, by

Observer, J. F. Diggle Esq. Ch.

New Gauge Walsley

Diameter ..	5										
Height ..	1	3									
Altitude ..	948	X									
Year ..	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January ..	6.62	2.70	3.01	3.76	4.04	1.97	5.60	1.95	3.95	2.42	3.602
February ..	4.11	1.64	1.85	3.59	3.54	2.13	3.55	1.94	2.98	3.37	2.870
March ..	.52	3.15	2.77	4.79	2.84	3.87	3.23	3.64	2.97	3.44	3.122
April ..	2.72	3.00	2.50	2.14	2.73	3.42	1.93	2.31	2.55	3.98	2.728
May ..	1.72	1.39	3.48	4.23	3.04	.60	4.09	3.89	3.29	3.06	2.879
June ..	3.85	2.17	1.39	2.23	1.36	3.43	1.68	7.79	2.37	2.83	2.910
July ..	2.66	2.39	3.15	4.90	2.21	3.27	2.12	3.66	5.72	7.01	3.709
August ..	5.82	2.92	4.06	6.52	5.65	5.24	4.58	5.01	4.39	3.55	4.774
September ..	1.77	2.08	2.24	5.36	1.75	2.70	1.58	1.49	4.17	3.65	2.679
October ..	6.47	3.66	5.26	10.56	2.74	3.60	7.36	5.25	2.43	6.43	5.366
November ..	4.50	5.95	3.57	3.54	3.66	4.76	4.63	3.40	2.97	1.65	3.863
December ..	5.67	5.71	3.42	2.60	3.52	.97	3.72	4.56	3.70	6.90	4.077
TOTALS ..	46.43	36.76	36.70	54.22	37.08	35.86	44.07	44.89	41.49	48.29	42.50

1906 St Pauls Norden Ch. $\frac{1}{2}$ mile S
Rochdale Station 4. . SE

1905.

Annual values rejected from survey. (6 low)

RAINFALL AT Rochdale Norden Dean

Lat.

Lon.

County of Lancashire Part

Rain Gauge, by

Observer

J. Diggles Esq C.E.

Burrell 3 Old gauge Weekly

Diameter ...	5										
Height	1.7										
Altitude ...	948 ft										
Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.
January	6.02	2.59	2.76	3.73	3.54	1.91	5.06	1.76	3.55		
February	4.00	1.54	1.82	3.37	3.52	2.01	3.05	1.84	2.78		
March42	2.94	2.48	4.56	2.74	3.73	2.68	3.34	2.91		
April	2.29	2.71	2.37	1.98	2.56	3.34	1.57	2.07	2.52		
May	1.41	1.26	3.26	4.17	2.86	.51	3.52	3.66	3.26		
June	4.54	1.95	1.29	2.08	1.21	3.26	1.40	7.08	2.23		
July	2.56	2.27	2.88	4.59	1.98	2.71	1.77	3.37	5.43		
August	5.26	2.56	3.88	6.12	5.39	4.44	3.95	4.56	4.06		
September	1.46	2.00	2.05	5.19	1.63	2.17	1.28	1.34	3.83		
October	5.81	3.36	4.98	10.12	2.61	2.70	6.60	5.08	2.36		
November	4.27	6.00	3.49	3.30	3.70	4.23	4.40	3.27	2.62		
December	5.32	5.49	3.27	2.34	3.45	.77	3.59	4.24	3.52		
TOTALS	43.36	34.67	34.53	51.54	35.19	31.78	38.87	41.61	39.07	(45.00)	

rough est.
VII.22

1906 St Paul's Ch Norden 1½ Mile S
 Rochdale Station 4 . SE

Annual values rejected from Survey. (10" low).

10 2897

RAINFALL at Rochdale Norden Dean No 1 OldhouseCounty of South LancashireObserver J. P. Diggle Esq. cl.Haywood, Middleton, M.R.River Basin Mersey Scale 3Station Rain Gauge, by N.Y.

Diameter ...	5										
Height	1.7										1.32
Altitude ...	948 ft					961					948.1
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...	4.51	1.42	4.04	3.94	3.14	7.79	2.93	2.34	3.30	4.21	
February ...	3.93	4.51	2.04	1.37	2.09	5.90	3.91	1.30	6.01	1.08	
March82	1.88	5.14	3.78	4.87	1.70	2.04	1.99	2.26	4.58	
April	2.58	2.47	.80	4.20	1.46	2.18	2.50	1.17	.86	2.21	
May	2.60	2.14	2.92	3.26	2.71	2.02	2.61	2.74	2.77	1.79	
June.....	3.52	3.60	6.20	2.02	2.52	1.18	2.62	1.93	1.38	1.26	
July	4.79	.36	4.56	1.01	4.95	5.95	2.50	2.50	3.54	1.94	
August.....	6.78	2.36	7.61	2.04	3.50	6.17	3.78	6.71	3.11	3.63	
September ..	.31	4.48	1.58	1.84	3.84	.75	2.34	1.98	11.46	1.78	
October ...	3.37	3.54	5.55	1.86	2.89	1.88	7.54	8.09	3.70	2.58	
November ..	5.31	3.80	3.88	4.57	5.24	2.48	3.06	3.53	2.48	3.44	
December ...	4.05	6.56	4.52	2.12	5.45	8.55	2.82	1.89	9.15	7.58	
TOTALS ...	42.57	37.07	48.83	32.01	42.66	46.55	38.55	36.17	50.02	35.88	

1915 Lime man

20 yards +

Rejected from Survey 10° low.

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
			Wadsworth	4 m 3 M	S E	St Paul's Norden	1.9m	SE S

10 2898

RAINFALL at Rockdale Norden Dean N^o2 Newfayre

County of South Lancashire

Observer J. S. Diggleby Esq.

River Basin Mersey Swell 3

Approved by Mr. R.

Rain Gauge, by

Diameter ...	5										
Height	1.4										
Altitude ...	948 ft										
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.
January ...	4.90	1.65	3.80	4.04	3.45	6.58	3.38	2.39	3.48	4.51	
February ...	4.40	5.24	2.18	1.66	2.48	5.30	4.26	1.30	6.57	1.07	
March95	2.19	5.56	4.42	5.35	1.60	2.03	2.25	2.44	4.51	
April	2.96	2.75	.92	4.62	1.67	1.99	3.00	1.35	1.06	2.51	
May	2.83	2.81	3.03	3.65	2.97	2.03	2.90	2.82	3.03	2.04	
June	3.71	3.96	6.58	2.59	2.65	1.20	3.10	2.14	1.77	1.76	
July	5.13	.48	4.85	1.14	5.39	5.81	2.76	2.70	3.90	2.38	
August	7.34	2.55	8.11	2.26	3.93	5.66	4.00	7.29	4.28	4.12	
September ..	.40	4.57	1.87	1.96	4.15	.83	2.80	2.34	12.50	2.26	
October ...	3.65	3.70	5.89	1.99	3.06	2.03	8.10	9.01	4.22	2.94	
November ..	5.58	4.21	4.21	5.18	5.55	1.94	3.26	4.47	2.76	3.82	
December ...	4.49	6.92	4.95	2.45	6.12	7.85	2.87	2.15	9.88	8.06	
TOTALS ...	46.34	40.53	51.95	35.96	46.77	40.82	42.46	40.21	55.89	39.98	
											w

1915 Wall

15 N

Rejected from Survey. 6" low.

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
			Wandsworth	4 ⁵ N 3.9M	S E	Norden	1 ⁵ N 1.2M	S E

RAINFALL at Rochdale Norden Dean No. 1 Old Gauge

County of Lancashire

Observer J. S. Diggle Esq. G.E. (Eng.)

River Basin Mersey - Irwell 3

Stepwood & Middleton Joint Water Bd

Snowdon Rain Gauge, by Neg.

Jentinsdale (Survey Manager)

W

Diameter ...	5"									5"	
Height	1.4				1.7					1.32	
Altitude ...	948									948.0	
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	MEAN.
January ...	4.05	6.31	3.60	2.44	3.57	3.14	4.81	4.16	11.58	2.41	6.73
February ...	3.62	3.38	4.73	4.20	3.89	6.41	4.38	2.10	4.43	1.22	.46
March	3.32	3.00	3.25	1.93	1.80	1.38	1.55	4.68	3.38	1.53	2.75
April.....	5.51	1.51	2.84	3.30	.98	2.18	1.69	3.01	0.99	1.18	2.07
May	6.63	2.85	1.61	3.16	4.97	4.97	4.57	2.27	1.43	3.16	1.76
June	2.96	2.23	2.39	7.4	1.92	.05	2.62	4.22	7.119	1.214	1.80
July	9.11	1.77	5.46	2.82	3.91	1.80	2.09	4.19	1.96	3.25	6.65
August	2.99	6.47	4.81	5.38	7.01	4.41	4.78	7.27	6.114	6.42	7.90
September...	1.68	1.56	4.05	4.84	4.04	3.76	3.85	5.92	0.53	1.95	4.19
October.....	1.60	3.67	.83	4.83	5.47	5.35	3.93	4.44	5.43	5.86	5.87
November...	2.13	3.40	3.34	6.27	2.64	2.22	6.48	4.90	6.42	8.49	6.16
December...	4.02	5.97	4.14	3.82	5.06	2.44	1.37	1.35	3.05	7.35	8.89
TOTALS...	46.62	37.12	41.05	43.73	42.31	38.11	42.12	48.51	53.13	114.06	50.53
	w	w	w	w	w	w	w	w	w	w	w

Rejected from survey, 10° low

Position of Station on reduced Ordnance Survey Map, 2 miles to 1 inch Series } No. of Map _____ Reference No. _____

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge
			Wardleworth	3 mi	E	Norden	1 mi S.

RAINFALL at Rochdale Norden Dean No 2. New Gauge

County of S. Lancashire

Observer J. S. Diggle Esq. C.E. (Engt.)

River Basin Mersey-Twiss 3

Haywood & Middleton Water Bd.

Rain Gauge, by

Fentonville (Sect Manager).

Diameter ...	5"										
Height	14									13 ¹ / ₂	
Altitude ...	948									948.10	
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1930. MEAN.	
January ...	4.40	6.95	3.60	2.92	3.71	3.58	4.96	4.58	11.91	2.40	6.00
February ...	3.84	55	5.15	4.06	1.06	6.94	4.55	2.25	4.89	1.26	.53
March	3.72	3.58	3.51	2.11	1.79	1.70	1.90	5.05	3.42	1.62	2.81
April.....	5.85	1.68	3.14	3.48	1.07	2.61	1.93	3.54	1.16	1.111	2.86
May	6.09	3.10	1.80	3.76	5.29	5.28	4.86	2.41	1.58	3.47	2.00
June	3.16	37	2.86	1.06	2.15	2.06	2.91	4.66	7.93	1.50	2.02
July	9.64	2.00	5.82	2.12	4.23	2.18	2.44	4.49	2.30	3.56	6.95
August	3.18	7.05	5.22	6.13	7.63	4.82	5.21	7.84	6.82	6.88	8.29
September...	3.01	1.71	4.51	5.46	4.38	4.20	4.26	6.36	0.68	2.24	5.06
October.....	1.70	3.88	95	5.39	5.98	5.56	4.21	4.72	6.36	6.38	6.37
November...	2.29	3.56	3.73	6.84	2.83	2.18	6.62	5.21	6.94	8.83	6.87
December...	4.13	6.50	4.67	3.93	(5.19)	2.75	1.79	1.26	3.17	4.78	3.94
TOTALS...	57.01	40.93	45.02	48.36	45.31	41.86	45.66	51.32	54.16	47.38	53.19
	W	W	W	W	W	W	W	W	W	W	W

724. Due account of periods of nonrecording.

Reprinted from Survey 6-Cm.

Position of Station on reduced Ordnance Survey } No. of Map
Map, 2 miles to 1 inch Series }

Reference No.

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge
			Haworth	3 mi	S E	Norden	1 mi S.

RAINFALL at Rochdale (Norden Dean) old g.County of South LancashireObserver Haywood Water BoardRiver Basin. Mersey - Irwell - 3Type of Gauge B.A. Glashutte 1940

Annual Average.....in. based on.....years obs. un-weighted. Period of average.....

Ref.....

815/15/28.

Diameter	S.											
Height	1.4.											
Altitude	948.											
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means	
January	4.64	5.34	2.25	3.29	1.56	4.43	3.34	4.78	5.34	(2.75)		
February	4.44	1.9	3.40	.46	4.91	2.12	5.13	1.67	5.24	2.64		
March	.36	2.61	3.17	2.27	1.50	2.64	1.14	.94	2.39	3.13		
April	3.29	3.46	2.00	2.37	3.33	.95	3.27	1.44	1.77	2.38		
May	2.96	5.06	1.72	3.05	.97	1.14	2.22	3.55	1.60	.93		
June	6.21	.84	1.59	2.88	3.64	4.12	2.38	4.54	3.85	.78		
July	4.51	4.49	2.63	2.10	1.78	5.12	2.39	4.67	6.75	4.32		
August	5.33	1.33	1.60	3.67	2.09	3.30	2.57	4.37	3.44	1.67		
September	3.30	5.34	1.86	3.74	7.98	5.86	1.96	1.80	1.70	4.31		
October	2.47	7.68	4.55	4.78	8.06	4.64	1.09	9.57	2.26	4.67		
November	10.17	2.95	2.08	2.24	4.87	5.34	1.96	5.71	7.09	7.52		
December	2.03	2.31	.67	7.23	3.71	3.29	2.59	5.82	3.87	4.57		
TOTALS	49.71	41.60	27.52	38.08	44.40	42.95	30.34	47.86	45.30	39.67		
	w	w	w	w	w	w	w	w	w	w		

Inspected 17.9.37. It is fence, open iron 18' diameter and 6' high. Badly exposed.
 1940 Jan. part estd.

Position of Station on reduced Ordnance Survey Map. } No. of Map..... Reference No.
 1 mile to 1 inch Series

Date.	Lat. N.	Long.	Railway Station,	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
			Wardleworth	4		Horden	1	

BRITISH RAINFALL ORGANIZATION, EXHIBITION ROAD, LONDON, S.W.7.

RAINFALL at Rochdale (Norden) new g.

County of South Lancashire

Observer Heywood Water Board

River Basin Mersey-Trwell - 3

Type of Gauge Standard

Annual Average in. based on years obs. un-weighted. Period of average

Ref.

815115/28.

Diameter	5.										Means
Height	1.44										
Altitude	948										
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	
January	5.24	5.63	2.38	3.64	1.77	4.45	3.75	5.33	5.32	(2.59)	
February	5.04	2.23	3.43	.52	5.63	2.17	5.25	1.98	5.63	2.58	
March	.40	2.79	3.22	2.87	1.68	2.86	1.48	1.24	2.69	3.38	
April	3.71	3.88	2.05	2.46	3.59	1.10	3.49	.58	2.00	3.58	
May	3.19	6.35	1.65	3.28	.88	1.18	2.35	3.87	1.64	1.00	
June	6.44	.91	1.70	3.03	3.81	4.29	2.60	4.96	4.11	.81	
July	5.05	4.24	2.88	2.33	2.09	5.57	2.68	5.07	7.25	4.74	
August	5.65	1.46	1.88	3.94	2.05	3.55	2.85	5.05	3.63	2.13	
September	3.59	5.53	1.97	3.94	8.30	6.02	2.16	1.83	1.58	4.89	
October	2.73	8.14	4.99	5.57	8.36	5.30	1.16	10.21	2.46	4.84	
November	10.34	3.28	2.25	2.34	5.15	5.83	2.09	6.10	7.31	8.13	
December	2.32	2.43	.72	7.37	3.84	4.13	2.87	5.65	4.05	5.03	
TOTALS	53.70	44.47	29.12	40.79	47.15	46.45	32.53	51.77	47.67	42.71	
	w.										

open site.

Inspected 17/9/37 g. next to old gauge and especially badly over-exposed.
 Suggest gauges be maintained for a year or so for comparison purposes and then abandoned.

1940 Jan part abd.

Position of Station on reduced Ordnance Survey Map, } No. of Map Reference No.
 1 mile to 1 inch Series

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
1932.			Wardleworth	4 m		Norden	1/2 m	

BRITISH RAINFALL ORGANIZATION, EXHIBITION ROAD, LONDON, S.W.7.

Station No. 2898

RAINFALL at Rosldale (Naden Dean) new g.

41

County of South Lancashire Observer Heywood ^{Middleton} Water Board.
 River Basin Trent Valley along Cl - 3
 Type of Gauge Snowdon Howard ¹⁹⁵⁰

Annual Average in. based on years obs. un-weighted. Period of average Ref

File No. 815115/28

Diameter	5"	561	792								
Height	1'4"		1								
Altitude	948'		4								
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means
January	1.00	5.43	6.21	6.09	3.06	5.13	3.04	9.67	2.39	3.71	
February	3.96	1.83	3.21	2.37	6.16	5.93	2.24	3.14	3.13	5.40	
March	4.29	3.23	1.12	.58	1.43	1.25	5.52	1.56	1.80	2.79	
April	2.19	2.19	2.33	3.55	2.40	1.30	3.10	1.96	4.30	3.42	
May	2.59	3.05	2.91	3.53	4.76	1.41	1.90	1.79	3.86	1.86	
June	.48	.84	4.31	3.15	5.38	4.21	2.90	5.36	.47	2.81	
July	3.51	4.95	3.50	4.59	3.25	5.08	3.86	2.48	2.61	5.97	
August	7.68	5.54	7.98	3.31	4.63	7.64	.35	5.66	4.00	7.32	
September	.84	2.77	5.75	5.95	3.17	8.39	3.20	3.30	1.94	8.04	
October	5.28	6.61	3.95	5.39	6.17	1.23	.99	3.27	5.65	2.73	
November	3.23	1.47	3.68	8.26	.67	7.46	6.51	2.66	6.47	6.09	
December	2.49	4.49	2.56	4.58	3.52	3.87	3.77	3.88	6.84	3.01	
TOTALS	37.83	43.30	47.51	51.35	44.60	52.90	35.44	44.73	43.49	52.85	
	W m.p.	m.p.	n.p.	m.p.	w.m.p.	w.p.	w.m.p.	w.p.	w.p.	w.p.	

1941 Gauge on moorland.

1942 n.p. low.

1943 n.p. low

1944 n.p. low

1945 n.p. low pending inspection 1946 n.p. low.

1947 n.p. low

1948 n.p. low.

1950 n.p. low.

Position of Station on reduced Ordnance Survey Map, No. of Map Reference No.

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction	Parish Church.	Distance from gauge	Direction
1941			Wardensworth	4 m.	S.	Morden	1/2 m.	S.

Station No. 2897

51

RAINFALL at Rockdale (Haden Dean) old g.

County of Lancashire

Observer H. Wood & Middleton Water Board

River Basin Mersey Fawell - 3

Type of Gauge Howard

Annual Average in. based on years obs. un-weighted. Period of average Ref.

File No. 815115/28

Diameter ...	5"		561	793						
Height ...	1' 32"				1					
Altitude ...	948'		2342	51						
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
										Means
January ...	4.09	3.84	1.93	4.44	2.65					
February ...	2.64	1.15	1.55	3.73	2.04					
March ...	4.80	3.07	2.09	3.05	2.01					
April ...	2.09	3.87	3.41	.84	2.62					
May ...	1.45	2.25	2.21	3.20	3.94					
June ...	1.79	4.01	3.37	3.97	3.92					
July ...	3.32	2.55	7.80	6.11	1.93					
August ...	5.27	5.19	6.34	6.91	1.03					
September ...	3.52	3.33	4.10	5.16	3.15					
October ...	1.15	5.07	2.33	9.11	2.14					
November ...	9.13	2.31	5.51	6.28	2.68					
December ...	7.06	4.39	2.04	6.91	5.03					
TOTALS ...	46.61	41.03	42.68	58.71	33.14					
	mpw	n.p.	mp	mp	mp					

N.B. reads
printedJuly
12/72

1951 Open moorland surrounding gauge.
n.p. low.

1952 n.p. low.

1954 n.p. low

1955 n.p. low.

Inspected June 1956 km. Deck Gauge
min disturbed. Site of w & sw. Recom-
mend hollow NW 300'.

34/86170

Position of Station on Ordnance One-Inch map : No. of Map National Grid Reference ... 34/170E56

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge
1951			Marsdenworth	4 m.	S.E.	Horden	12 m S.E.

Summary of Earlier Records from 10-year Sheets :

Record D. or d		1910-19	1920-30	1931-40	1941-50	1951-60
		V D 15. 18	✓	✓	✓ n.p. 42 - 50	-

Station No. 2898

51

RAINFALL at Rosedale (Raden Dean) near g.County of S. LancashireObserver Haywood & Middleton Water BoardRiver Basin Mersey - LowellType of Gauge Howard

Annual Average in. based on years obs. un-weighted. Period of average Ref.

File No. 215/115/28

Diameter	5"	581	792								
Height	1' 3"			1							
Altitude	948'	X	1397	51							
Year	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means
January	4.31	4.06	1.86	4.52	2.89						
February	2.69	1.10	1.62	3.66	1.98						
March	4.87	2.77	1.85	3.05	1.95						
April	2.28	3.86	3.26	.88	2.72						
May	1.72	2.25	2.20	3.27	3.98						
June	1.84	4.12	3.37	4.02	3.82						
July	3.38	2.63	7.61	6.34	1.94						
August	5.31	5.37	6.23	6.99	1.04						
September	3.54	3.47	3.96	5.35	3.29						
October	1.23	5.10	2.52	9.35	2.29						
November	9.18	2.39	5.37	6.35	2.65						
December	7.89	4.61	1.95	6.17	5.13						
TOTALS	48.24	41.73	41.64	59.95	33.38						
	N.E.	n.p.	mp.	W.P.	W.n.p.						

1951 n.r. low Gauge stands on thin moorland

1952. n.p. low.

1953 up low

1954 np low.

1955 np low.

Inspected June 1956 in Dells. Gauge about 6' E of old gauge. S. 20° E 795m

34/1856/170

Position of Station on Ordnance One-Inch map : No. of Map National Grid Reference 34/112085E

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Parish Church.	Distance from gauge
1951			Wardleworth	4 m. N.E.	Wardle	12 m. S.E.

Summary of Earlier Records from 10-year Sheets :

Record D. or d		1910-19	1920-30	1931-40	1941-50	1951-60
		✓	✓	✓	✓ n.p. 42-50	