

RAINFALL AT *Pendle Hill Ogden Reservoir*

Lat. _____

Lon. _____

County of *Central Lancashire*

Rain Gauge, by _____

Observer *Smith Watchhead Esq*

Ribble & b 1.

Diameter . . .												
Height												
Altitude										<i>935</i>		
Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	MEANS.	
January										<i>8.13</i>		
February										<i>2.18</i>		
March										<i>3.09</i>		
April										<i>4.09</i>		
May										<i>3.49</i>		
June										<i>1.54</i>		
July										<i>2.33</i>		
August										<i>1.70</i>		
September . . .										<i>6.03</i>		
October										<i>3.12</i>		
November										<i>2.81</i>		
December										<i>3.57</i>		
TOTALS . . .										<i>42.38</i>		

1899 Rec'd 28 Sep + 2nd 17 Dec 1917

RAINFALL at

Pondle Hill Ogden Reservoir

County of Central Massachusetts

Observer

Smith Whitehead Esq.

River Basin

Ribble & C

Rain Gauge, by

Diameter ...												
Height												
Altitude ...	935											
Year ...	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	MEANS.	
January ...	4.73	2.38	4.67	5.27	4.36	3.07	6.43	2.47	5.81	2.46		
February ...	5.56	2.12	1.52	6.40	4.20	3.59	2.54	3.11	3.81	5.58		
March53	2.79	4.13	6.25	2.52	3.66	2.92	5.22	3.46	2.99		
April	2.96	3.45	2.57	3.63	4.52	2.36	1.22	2.31	6.50	4.74		
May	1.81	1.44	3.52	2.93	3.23	1.02	4.54	4.90	3.48	2.61		
June	3.56	1.86	1.64	2.51	1.64	3.54	1.50	9.37	2.73	2.65		
July	3.12	1.64	4.54	5.01	1.94	3.20	2.22	3.49	6.99	8.47		
August	6.33	3.70	4.26	7.53	5.83	4.48	4.47	6.87	4.90	3.43		
September...	2.78	.87	1.34	6.07	1.92	3.60	1.34	1.36	5.42	3.51		
October ...	7.37	4.36	5.83	12.17	2.56	4.34	5.56	4.75	1.82	6.14		
November..	4.80	9.31	3.02	3.89	5.61	4.67	4.50	3.07	4.22	2.68		
December...	5.14	6.15	4.40	3.10	3.96	2.29	4.18	6.77	3.90	7.32		
TOTALS ...	48.69	40.07	41.44	64.76	42.29	37.82	41.4	253.69	49.10	52.58		

1908 Aug { out of order estimated
 1910-1909 Rec 28 Sept + End 17 Dec 1917

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.

RAINFALL at ^(45 Bailey) Pendle Hill Ogden Reservoir
County of Central Lancashire

Observer

Smith Whitelake adley CGRiver Basin Ribble & C 1Glaisher Rain Gauge, by NB
 Serial { 7.96
8.05
7.93
8.00 (17.12.20)

Diameter ...								8				
Height								20				
Altitude ...	935							950				
Year ...	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	MEANS.	Totals.
January ...	7.07	2.18	3.51	4.68	3.09	6.63	4.95	2.47	3.09	4.40		18-19. 14.91
February ...	6.37	7.82	1.87	2.49	3.47	3.45	4.18	1.57	7.50	1.60		14.85
March	1.05	3.20	6.44	6.43	5.07	2.21	1.72	1.83	1.65	5.41		10.61
April	3.62	4.03	1.45	4.34	1.50	2.20	3.27	1.43	1.06	2.18		7.91
May	3.55	3.82	2.25	3.50	2.46	2.12	2.84	1.55	1.71	2.31		8.41
June	3.30	4.33	6.95	3.09	1.88	.62	2.90	3.52	2.81	1.82		11.05
July	4.38	.88	3.67	1.34	2.82	5.22	2.89	1.91	5.27	2.07		12.14
August	7.54	3.79	7.75	2.18	3.62	4.96	4.08	5.93	5.09	3.69		18.79
September..	.68	4.88	2.98	2.38	2.95	1.44	2.50	3.06	13.25	3.84		22.65
October ...	4.53	3.90	5.27	1.99	2.39	.65	5.46	8.13	5.77	2.28		21.64
November..	4.42	4.39	4.99	5.33	6.43	1.72	3.68	3.32	3.92	3.59		14.51
December...	5.42	7.43	6.03	3.94	5.38	5.95	3.71	2.52	11.02	7.12		26.37
TOTALS ..	51.92	50.65	53.16	41.69	41.06	37.17	42.18	37.24	62.14	40.25		181.84

1910-1916 Rec'd 28 Sept + sent 17 Dec 1917

TS 17.12.20. G. fixed in stone block, in small wooden enclosure 2 ft high
on S. side of No. 3 Reservoir (1/2 mi E of No. 1.) 100 ft. above water & on sloping
ground probably a little over exposed.

Date.	Lat. N.	Long.	Railway Station.	Distance.	Direction.	Church.	Distance.	Direction.
1917	53.51.10	2.17.22W	Nelson	3 1/2 m	SE	Newchurch	7 1/2 m.	SE
1918	53.51.9	2.16.55		3 1/4		St. Mary.	3/4	

RAINFALL at Barley Ogden ReservoirCounty of LancashireObserver Smiths Whitehead Eng. Co.River Basin Ribble & C.(1925) J. A. Rodwell Eng. Co.Flashes Rain Gauge, by No. 5.Water Eng. Nelson

Diameter ...	8												
Height	20									16			
Altitude ...	950												
Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	MEANS 1930		
January ...	4.64	8.45	4.51	6.76	4.03	4.38	4.76	5.73	13.26	2.78	7.70	Totals 67.00	
February ...	5.40	6.7	6.41	6.22	7.7	7.71	5.75	2.07	7.36	1.00	.61	43.97	
March	3.88	4.69	2.92	1.86	1.95	1.81	1.98	4.58	2.88	1.81	2.74	31.10	
April	4.12	1.65	3.20	4.30	2.25	3.03	1.88	3.96	1.68	1.54	3.45	31.06	
May	4.53	2.89	2.13	4.83	6.58	4.47	4.23	2.17	1.26	3.25	3.32	39.66	
June	2.90	1.04	3.78	1.86	3.71	1.2	3.15	4.31	6.76	3.18	4.72	35.53	
July	8.12	3.64	6.02	6.45	5.02	2.84	4.08	5.38	3.75	4.97	4.94	55.21	
August	3.06	7.20	6.27	7.37	8.78	5.55	5.20	8.62	8.35	9.02	8.12	77.54	
September...	2.68	2.91	4.81	7.48	5.87	4.16	5.87	9.07	1.71	2.36	3.89	50.81	
October	1.91	4.33	1.04	7.83	5.15	5.72	5.60	5.62	6.52	7.22	8.60	59.54	
November...	2.94	2.56	3.04	7.83	5.14	2.54	7.19	6.57	7.48	9.02	7.75	62.06	
December...	3.25	8.94	4.82	5.07	5.58	4.58	2.13	.97	3.64	10.44	3.67	53.09	
TOTALS...	47.43	48.97	48.95	67.86	54.83	46.91	51.82	59.05	64.65	56.59	59.51	606.57	
	3	3	3	3	3	3	3	3	3	3	3	47.43	

1920 Gauge impeded G.S. 17.XII.20. See East sheet

1928 Wall 5' high 120' S and 140' W

1929. Read from old Blaxton gauge at 5' above ground; new gauge to be fixed soon.
Wall 5' high 20' S and W.

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

Reference No.

Date.	Lat. N.	Long. W.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1918	53° 51' 9"	2° 15' 55"	Nelson Brierfield	3 1/2 mi 2 5/6	S.E. S.E.	St. Mary	3 1/2 mi 1/2	S.E.

RAINFALL at Barley (Ogden Reservoir)County of Central LancashireObserver Nelson Corpin W.W.River Basin Ribble &c - 1

Type of Gauge.....

Annual Average 46.0 in. based on 31 years obs. ~~un~~-weighted. Period of average 1881-1915 Ref. 5

665521/26

Diameter	5.								8			
Height	1.6											
Altitude	950.											
Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Means	
January	6.53	6.62	3.55	4.54	2.45	2.35	4.18	6.61	6.11	1.94		Total 46.88
February	6.37	.16	4.75	4.7	9.33	2.06	6.73	2.54	5.26	2.61		40.28
March	.67	3.45	3.14	2.50	1.89	2.64	1.93	2.65	2.60	3.65		25.12
April	3.33	3.59	1.87	3.42	3.42	1.32	4.00	1.19	2.54	3.41		28.09
May	2.82	4.43	2.37	4.39	1.24	1.19	2.58	3.72	1.54	1.46		25.76
June	7.41	1.26	2.19	3.42	4.07	4.38	3.58	5.61	4.67	.91		37.50
July	5.10	6.99	3.60	3.09	2.80	7.10	2.80	6.25	7.48	4.74		49.45
August	5.41	1.92	2.22	5.71	1.71	4.03	3.33	6.06	2.34	3.50		36.25
September	3.24	9.27	1.46	4.66	8.87	5.29	3.05	2.41	1.77	5.34		45.36
October	4.03	8.51	4.37	7.36	12.71	6.17	2.09	11.65	1.67	4.72		63.28
November	7.72	4.03	2.01	3.11	5.36	5.65	2.17	6.39	9.13	7.04		52.61
December	3.54	2.11	.69	5.84	3.58	5.90	2.47	5.51	4.31	5.97		37.92
TOTALS	56.67	52.34	32.22	48.51	57.43	50.68	38.91	60.59	49.46	45.29		491.00
	D.	D.	D.	D.	D.	D.	D.	D.	D.	D.		2.46

Position of Station on reduced Ordnance Survey Map,
1 mile to 1 inch Series

No. of Map.....

Reference No.....

Date.	Lat. N.	Long. W.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge	Direction from gauge
1932.	54° 51' 11"	2° 6' 52"						

RAINFALL at § Barley (Ogden Reservoir)Station No. 2986

41

County of Central Lancashire Observer Belmont Corp. W.W.River Basin Ribble & L. - 1Type of Gauge StandardAnnual Average 46.0 in. based on 31 years obs. un-weighted. Period of average 1851-1915 Ref. SFile No. 665,521/26

Diameter	5"										
Height	1'6"										
Altitude	950'										
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means
January	1.41	6.27	5.95								
February	6.14	1.99	3.50								
March	3.96	3.42	1.74								
April	2.55	1.75	2.87								
May	2.48	2.74	2.77								
June	1.53	1.37	6.07								
July	1.56	7.11	4.75								
August	6.43	6.15	8.51								
September	1.06	4.43	5.01								
October	7.55	9.48	(4.61)								
November	2.75	1.82									
December	3.50	5.52									
TOTALS	40.22 D	52.05 D	imp.								

New gauge 2986/1. ~~un-weighed~~

§ Turf wall round gauge Aug 1943

Position of Station on reduced Ordnance Survey Map,
1 mile to 1 inch Series

No. of Map.....

Reference No.....

Date.	Lat. N.	Long.	Railway Station.	Distance from gauge	Direction from gauge	Parish Church.	Distance from gauge.	Direction from gauge.

Station No. 2986/1RAINFALL at Barley (Ogden Reservoir) 2 gauge

41

County of Central Lancashire Observer Nelson Expts. W.W.River Basin Ribble & C-1

Type of Gauge.....

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

File No. 665521/26

Diameter	5 1/4	4 1/2	5"								
Height		1	1'0"								
Altitude		41	908'								
Year	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Means
January			100 (5.95) 100	9.97	5.04	5.71	4.91	9.25	4.41	4.72	Total 57.64
February			(3.50) 100	3.76	7.18	7.62	3.25	4.39	4.61	6.94	47.38
March			(1.75) 100	1.13	2.53	1.49	8.01	3.24	2.58	2.56	30.72
April			(2.87) 100	3.71	3.40	1.73	3.97	3.04	6.09	4.26	33.37
May			(2.77) 100	4.58	5.49	1.56	2.70	1.56	2.92	2.23	29.03
June			(5.95) 100	4.65	6.27	3.44	3.64	5.69	1.22	4.21	37.11
July			(4.75) 100	4.48	3.80	5.66	5.22	2.61	3.40	4.83	43.42
August			(8.51) 100	4.04	3.18	9.97	1.25	5.41	4.01	10.15	58.40
September			(5.00) 100	8.49	4.05	8.63	4.89	5.28	2.10	9.40	53.34
October			5.03	6.30	7.41	1.49	1.14	4.18	5.79	5.10	53.47
November			4.67	8.87	7.6	8.11	10.11	3.99	6.11	7.92	55.11
December			3.24	5.77	2.87	5.07	5.30	3.41	10.47	4.13	49.28
TOTALS			(54.4) 100	65.81	51.98	60.50	53.39	52.05	53.71	66.45	550.27

1943 no obstructions New gauge is 5ft from old site

1948 S turf wall round gauge

Position of Station on reduced Ordnance Survey Map,
1 mile to 1 inch Series

No. of Map.....

Reference No.....

Date.	Lat. N.	Long.	Railway Station.	Distance Direction from gauge	Parish Church.	Distance Direction from gauge.
1943			Nelson	2 2/3 - 116°	Newchurch	1/2 m - 128°

BRITISH RAINFALL ORGANIZATION

Station No. 2986/1RAINFALL at Barley (Ogden Reservoir)

51

County of Central Lancashire Observer Nelson George W.D.River Basin Ribble & C.

Type of Gauge

Annual Average in. based on years obs. un-weighted. Period of average Ref.
" " 55-85 " " 12 " " within 1944-57 " " 1916-50
File No. 665321/26

Diameter ...	5"			574	467						
Height ...	1' 0"				1						
Altitude ...	908'				51						
Year ...	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Means
January ...	6.13	7.58	2.72	5.53	2.84	5.33	6.08	3.82	3.91	7.28	
February ...	4.48	1.76	3.57	3.36	3.06	1.64	3.63	4.35	1.23	3.34	
March ...	5.57	3.06	2.40	3.29	1.94	2.46	5.55	2.19	1.94	1.62	
April ...	3.05	3.21	3.77	1.62	3.50	2.99	.99	1.98	3.23	3.56	
May ...	1.74	2.10	2.47	3.22	4.60	3.07	2.12	6.05	2.05	2.02	
June ...	1.59	4.63	2.32	3.98	4.35	2.95	2.59	5.36	3.70	1.67	
July ...	4.82	3.67	7.45	9.44	1.30	5.88	7.16	4.02	4.83	11.73	
August ...	6.11	9.80	7.42	8.32	1.28	14.47	6.87	4.75	.66	7.10	
September ...	5.35	6.13	5.84	8.34	4.04	5.70	7.98	6.60	.51	3.19	
October ...	1.54	4.12	2.21	11.18	3.78	3.47	9.71	4.15	7.10	3.69	
November ...	10.15	2.77	7.46	7.44	2.06	2.29	2.10	2.44	5.91	8.38	
December ...	12.86	5.36	3.36	9.51	8.80	5.63	7.53	4.54	8.52	6.34	
TOTALS ...	68.39	54.19	50.99	75.73	42.55	55.88	62.31	55.25	43.59	59.92	
	D	D	D	D	D	D	D	D	D	D	

1951 Gauge surr. by high wall & no other obstruction

7.23

Position of Station on Ordnance One-Inch map :

No. of Map 95National Grid Reference SD641743285

Date.	Lat. N.	Long.	Railway Station.	Distance Direction from gauge	Parish Church.	Distance Direction from gauge.
1951			Nelson	3 m. 117°	Newchurch	1/2 m. 128°

Summary of Earlier Records from 10-year Sheets :

1916-1950, P - Rejected

Record D, or d	1910-19	1920-30	1931-40	1941-50	1951-60
	✓	✓	✓	296 before 1944	✓
	D 17-19	✓	✓	✓	✓